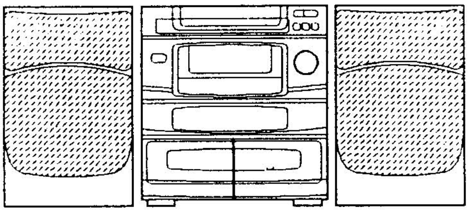
aiwa

aiwa
SERVICE

CX-Z1500
CX-Z1550



COMPACT DISC STEREO
CASSETTE RECEIVER

- BASIC TAPE MECHANISM : 2ZM–3MK2 PR3
- BASIC CD MECHANISM : 4ZG–1 TFR

- TYPE: HE,HR,LH,G,K,
EE,EZ,EEZ

CD–CASSEIVER	SPEAKER	TURNTABLE	L/D PLAYER	REMOTE CONTROLLER
CX–Z1500 (TYPE: HE,HR)	SX – FZ1500 SX – FZ1570	PX-E850 HE (OPTIONAL)	–	RC–T503
CX–Z1500 (TYPE: EZ,G)	SX – FZ1500	PX-E850 E (OPTIONAL)		
CX–Z1500 (TYPE: EE,LH)		EE : PX-E850 E LH : PX-E850 H		
CX–Z1500 (TYPE: K)		PX-E850 K (OPTIONAL)		
CX–Z1550 (TYPE: EE,EEZ)	SX – FZ1200	PX-E850 E		
CX–Z1550 (TYPE: HE)		PX-E850 E (OPTIONAL)	LV-Z1000	

If requiring information about the CD mechanism, see Service Manual of 4ZG-1, S/M Code No. 09-94C-086-20T.

If requiring information about the TURNTABLE, see Service Manual of PX-E850, (TYPE : EE,K,U,H,HE), S/M Code No. 09-947-070-90I.

S/M Code No. 09–957–100–3FP

SERVICE MANUAL

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SPECIFICATIONS

TUNER / AMPLIFIER

<FM section>

Frequency range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	16.2 dBf (75 ohms,1.8μV)
Antenna	75 ohms (unbalanced)

<AM section> (HE,HR,LH,G,K)

Frequency range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 μV/m
Antenna	Loop antenna

<MW section> (EE,EZ,EEZ)

Frequency range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 μV/m
Antenna	Loop antenna

<LW section> (EE,EZ,EEZ,K)

Frequency range	144 kHz to 290 kHz
Usable sensitivity	1000 μV/m
Antenna	Loop antenna

<Amplifier section>

Power output (Without connecting to the SURROUND SPEAKERS)	HE,HR,LH,G : Rated : 40 W + 40 W (6 ohms, T.H.D. 1%, 1kHz) Reference : 50 W + 50 W (6 ohms, T.H.D. 10%, 1kHz) EE,EZ,EEZ : Rated : 30 W + 30 W (6 ohms, T.H.D. 1%, 1kHz) Reference : 37.5 W + 37.5 W (6 ohms, T.H.D. 10%, 1kHz) DIN MUSIC POWER : 73 W +73 W K : Rated : 25 W + 25 W (6 ohms, T.H.D. 1%, 1kHz/ DIN45500) Reference : 30 W + 30 W (6 ohms, T.H.D. 10%, 1kHz/ DIN45324) DIN MUSIC POWER : 63 W +63 W
Harmonic distortion	HE,HR,LH,G : 0.1% (20 W,1 kHz, 6 ohms) EE,EZ,EEZ : 0.1% (15 W,1 kHz, 6 ohms) K : 0.1% (12.5 W,1 kHz, 6 ohms)
Input	VIDEO/AUX/PHONO : Except K : 398 mV (47 kohms with volume) K : 150mV MIC 1,MIC 2 : HE,HR : 1mV (10 kohms) LH,G,EE,EZ,EEZ,K : 1.8mV (10 kohms)
Output	SUPER WOOFER HE,HR,LH,G : 1.5 V EE,EZ,EEZ : 1.3 V K : 1.2 V SPEAKERS : accepts speakers of 6 ohms or more SURROUND SPEAKERS : accepts speakers of 16 ohms or more PHONES (o 6.3mm stereo jack) : accepts headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks. 2 channels stereo
Frequency response	CrO$_2$ tape : 50 – 16000 Hz Normal tape : 50 – 15000 Hz
Signal-to-noise ratio	Except K : 60 dB (DOLBY B NR ON, CRO2 tape peak level above 5kHz) K : 60 dB (CRO2 tape peak level above 1 kHz)
Recording system	AC bias
Heads	DECK 1 : Playback head x 1 DECK 2 : Recording / playback / erasure head x 1

<CD player section>

Laser	Semiconductor laser (λ =780 nm)
D-A conversion	1-bit dual
Wow and flutter	Unmeasurable
Signal-to-noise ratio	85 dB (1 kHz. 0dB)
Harmonic distortion	0.03% (1 kHz. 0dB)

<Speaker system> SX-FZ1500/FZ1570

Cabinet type	3 way, bass reflex (magnetic sealed type)
Speaker	Woofer : 170 mm (6 $^{3}/_{4}$ in.) cone type Tweeter : 80mm (3 $^{1}/_{4}$ in.) cone type Super tweeter : 50mm (2 in.) ceramic type Surround speaker : 80mm (3$^{1}/_{4}$ in.) cone type
Impedance	Front speaker : 6 ohms Surround speaker : 16 ohms
Output sound pressure level	89 dB/W/m
Dimensions (W x H x D)	260 x 434 x 265 mm (10$^{1}/_{4}$ x 17$^{1}/_{8}$ x 10$^{1}/_{2}$ in.)
Weight	5.2 kg (7 lbs. 15oz)

<Speaker system> SX-FZ1200

Speaker	4 way, bass reflex (with surround speaker) Woofer : 220 mm (8 $^{3}/_{4}$ in.) cone type mid range : 80 mm (3 $^{1}/_{4}$ in.) cone type Tweeter : 50 mm (2 in.) cone type Super tweeter : 20mm ($^{13}/_{16}$ in.) ceramic type Surround speaker : 80mm (3$^{1}/_{4}$ in.) cone type
Impedance	Front speaker : 6 ohms Surround speaker : 16 ohms
Output sound pressure level	89 dB/W/m
Dimensions (W x H x D)	260 x 434 x 265 mm (10$^{1}/_{4}$ x 17$^{1}/_{8}$ x 10$^{1}/_{2}$ in.)
Weight	5.2 kg (7 lbs. 15oz)

<General>

Power requirements	HE,HR,LH : AC 120V/ 220V-230/ 240V, switchable. 50/60 Hz EE,EZ,EEZ.K : AC 230, 50 Hz G : AC 230-240 V. fixed, 50 Hz
Power consumption	HE,HR,LH,G : 115W EE,EZ,EEZ : 205 W K : 170W
Dimensions (W x H x D)	360 x 379.5 x 314.8 mm (14$^{1}/_{4}$ x 15 x 12$^{1}/_{2}$ in.)
Weight	7.6 kg (16 lbs 12 oz)

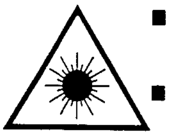
- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
  "DOLBY" and the double-D symbol ◻◻ are trademarks of Dolby Laboratories Licensing Corporation.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saataa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herin may result in hazardous radiation exposure.

ATTENTION

L'utillisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL

Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

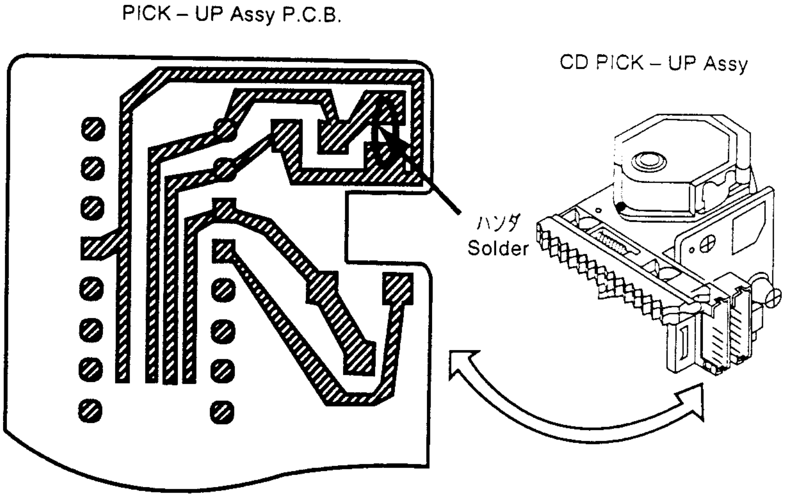
CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

Precaution to replace Optical block

(KSS-210A)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use the clothes do not touch the diode.

1) After the connection, remove solder shown in figure below.



ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

IC

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
	87-020-454-010		IC,DN6851
	85-MA4-652-010		IC,UPD78044BGF-013
	87-002-669-019		IC,GP1U571X
	87-020-966-019		IC,STK4142-MK2<EXCEPT HE,LH,HR,G>
	87-001-582-019		IC,STK4152-2<HE,LH,HR,G>
	87-017-915-089		IC,BU4094BCF
	87-070-121-010		IC,HA12185NT
	87-070-232-019		IC,BA3834S
	87-001-874-019		IC,HA12134A<EXCEPT K>
	87-017-673-019		IC,BA3837
	87-070-263-019		IC,TA2041N
	87-001-607-089		IC,NJM4558M
	87-017-914-019		IC,BU4094BC
	87-017-804-019		IC,BU4052BC
	87-017-726-089		IC,BU4052BCF
	87-017-917-089		IC,BU4066BCF
	87-017-022-089		IC,NJM2068M-D(T1)
	87-017-698-080		IC,M65843FP<HE,HR>
	87-070-127-019		IC,LC72131
	87-017-714-019		IC,LA1836
	87-017-675-080		IC,M65840FP<HE,HR>

TRANSISTOR

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
	87-026-463-089		TR,2SA933S
	89-213-702-019		TR,2SB1370E
	87-026-609-089		TR,KTA1266GR
	87-026-610-089		TR,KTC3198GR
	89-327-125-089		C-TR,2SC2712GR
	89-332-665-089		TR,2SC3266GR
	89-111-625-089		C-TR,2SA1162GR
	87-026-213-089		C-TR,DTC114YK
	87-026-226-089		C-TR,DTA143EK
	87-026-210-089		C-TR,DTC144EK T147
	89-333-266-089		C-TR,2SC3326B
	89-113-187-889		TR,2SA1318TU
	87-026-232-089		C-TR,DTA144WK
	89-503-655-689		FET,2SK365GR,BL
	89-333-317-089		TR,2SC3331T
	89-327-126-089		C-TR,2SC2712BL<EXCEPT HE,LH,HR,G>
	89-109-521-089		TR,2SA952K
	89-112-965-089		TR,2SA1296GR
	87-026-214-089		TR,DTA114YS
	89-327-143-089		C-TR,2SC2714 (O)
	89-505-434-589		C-FET,2SK543(4/5)

DIODE

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
	87-017-978-089		DIODE,1N4003
	87-020-027-089		C-DIODE,1SS184
	87-020-125-089		C-DIODE,1SS181
	87-070-345-089		DIODE,1N4148
	87-001-916-089		ZENER UTZJ10B
	87-070-150-089		ZENER,MTZJ33D
	87-002-225-019		DIODE DBF 40C-K10
	87-002-608-089		DIODE,DSF10TC
	87-027-702-089		ZENER,HZ6C2L
	87-001-911-089		ZENER,UTZJ4.7A (TAPG)
	87-001-913-089		ZENER UTZJ5.6B
	87-020-691-089		DIODE,1SS132 T-72
	87-001-559-089		DIODE ISS131 (T-72)
	87-017-091-089		ZENER,HZS5C1<HE,HR>
	87-017-148-089		ZENER,HZS6A1L
	87-070-136-089		ZENER,MTZJ5.1B<HE,HR>
	87-020-465-089		DIODE,1SS133

MAIN C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
BPF831	87-030-105-019		FLTR,BPMB6A<EXCEPT HE,LH,HR,G>
C001	87-010-197-089		C-CAP,S 0.01-25<EXCEPT HE,LH,HR,G>
C102	87-010-390-099		CAP ELECT 3300-25<EZ,EEZ,EE,K>
C102	87-010-928-099		CAP ELECT 4700-25V<HE,LH,HR,G>
C104	87-010-235-089		CAP,E 470-16 SME
C105	87-010-381-089		CAP,E 330-16 SME
C106	87-010-430-089		CAP,ELECT(TAPG) 100-63V
C107	87-010-247-089		CAP,E 100-50 SME<K>
C107	87-010-392-089		CAP,E 33-35 SME<HE,LH,HR,G>
C107	87-010-246-089		CAP,E 47-35<EZ,EEZ,EE>
C108	87-010-247-089		CAP,E 100-50 SME<K>
C108	87-010-246-089		CAP,E 47-35<EXCEPT K>
C109	87-010-263-089		CAP,E 100-10 SME 5X11
C112	87-010-382-089		CAP,E 22-25 SME
C113	87-010-403-089		CAP,E 3.3-50 SME
C115	87-012-368-089		C-CAP S 0.1-50F
C116	87-012-140-089		C-CAP,S 470P-50 CH
C117	87-012-368-089		C-CAP S 0.1-50F
C118	87-012-368-089		C-CAP S 0.1-50F
C119	87-012-368-089		C-CAP S 0.1-50F
C126	87-016-055-099		CAP,E 3300-42<EXCEPT HE,LH,HR,G>
C126	87-016-474-099		CAP,E 3300-50<HE,LH,HR,G>
C127	87-016-055-099		CAP,E 3300-42<EXCEPT HE,LH,HR,G>
C127	87-016-474-099		CAP,E 3300-50<HE,LH,HR,G>
C128	87-010-196-089		C-CAP,S 0.1-25 F
C129	87-010-196-089		C-CAP,S 0.1-25 F
C130	87-010-196-089		C-CAP,S 0.1-25 F
C131	87-010-196-089		C-CAP,S 0.1-25 F
C152	87-010-260-089		CAP,E 47-25 SME
C201	87-018-205-089		CAP,TC-U 0.022-25<EZ,EEZ,EE,K>
C202	87-018-205-089		CAP,TC-U 0.022-25<EZ,EEZ,EE,K>
C213	87-010-404-089		CAP,E 4.7-50 SME
C214	87-010-404-089		CAP,E 4.7-50 SME
C215	87-010-184-089		C-CAP,S 3300P-50 B
C216	87-010-184-089		C-CAP,S 3300P-50 B
C217	87-010-404-089		CAP,E 4.7-50 SME
C218	87-010-404-089		CAP,E 4.7-50 SME
C220	87-010-198-089		C-CAP,S 0.022-25<EZ,EEZ,EE,K>
C221	87-010-403-089		CAP,E 3.3-50 SME
C222	87-010-403-089		CAP,E 3.3-50 SME
C223	87-010-260-089		CAP,E 47-25 SME
C224	87-010-260-089		CAP,E 47-25 SME
C225	87-010-260-089		CAP,E 47-25 SME
C226	87-010-260-089		CAP,E 47-25 SME
C227	87-018-209-089		CAP,TC-U 0.1-50 F
C228	87-018-209-089		CAP,TC-U 0.1-50 F
C231	87-018-132-089		CAP,TC-U 2200P-16<EZ,EEZ,EE,K>
C243	87-010-154-089		C-CAP,S 10P-50 CH
C244	87-010-154-089		C-CAP,S 10P-50 CH
C245	87-018-208-089		CAP,TC-U 0.047-50 F
C247	87-010-177-089		C-CAP,S 820P-50<EXCEPT HE,LH,HR,G>
C248	87-010-177-089		C-CAP,S 820P-50<EXCEPT HE,LH,HR,G>
C249	87-018-209-089		CAP,TC-U 0.1-50<EXCEPT HE,LH,HR,G>
C261	87-010-400-089		CAP,E 0.47-50 SME
C262	87-010-263-089		CAP,E 100-10 SME 5X11
C263	87-010-263-089		CAP,E 100-10 SME 5X11
C297	87-010-263-089		CAP,E 100-10 SME 5X11<HE,LH,HR,G>
C297	87-010-265-089		CAP,E 33-16 SME<K>
C297	87-010-260-089		CAP,E 47-25 SME<EZ,EEZ,EE>
C298	87-010-263-089		CAP,E 100-10 SME 5X11<HE,LH,HR,G>
C298	87-010-265-089		CAP,E 33-16 SME<K>
C298	87-010-260-089		CAP,E 47-25 SME<EZ,EEZ,EE>
C303	87-012-157-089		C-CAP,S 330P-50 CH
C304	87-012-155-089		C-CAP,S 180P-50 CH<K>
C305	87-012-155-089		C-CAP,S 180P-50 CH<K>
C304	87-012-156-089		C-CAP,S 220P-50 CH<EXCEPT K>
C305	87-012-156-089		C-CAP,S 220P-50 CH<EXCEPT K>
C306	87-012-157-089		C-CAP,S 330P-50 CH

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C307	87-010-805-089		C-CAP,S 1-16F
C308	87-010-805-089		C-CAP,S 1-16F
C310	87-010-197-089		C-CAP,S 0.01-25 B
C311	87-010-198-089		C-CAP,S 0.022-25 B
C312	87-010-198-089		C-CAP,S 0.022-25 B
C313	87-010-181-089		C-CAP,S 1800P-50 B
C314	87-010-181-089		C-CAP,S 1800P-50 B
C315	87-010-179-089		C-CAP,S 1200P-50 B
C316	87-010-179-089		C-CAP,S 1200P-50 B
C317	87-012-142-089		C-CAP,S 0.33-16 F<EXCEPT K>
C318	87-012-142-089		C-CAP,S 0.33-16 F<EXCEPT K>
C319	87-012-141-089		C-CAP,S 0.22-16 F<EXCEPT K>
C320	87-012-141-089		C-CAP,S 0.22-16 F<EXCEPT K>
C321	87-010-196-089		C-CAP,S 0.1-25 F
C322	87-010-196-089		C-CAP,S 0.1-25 F
C324	87-010-260-089		CAP,E 47-25 SME
C325	87-010-381-089		CAP,E 330-16 SME
C326	87-010-196-089		C-CAP,S 0.1-25 F
C327	87-018-209-089		CAP,TC-U 0.1-50 F<K>
C328	87-018-209-089		CAP,TC-U 0.1-50 F<K>
C351	87-012-154-089		C-CAP,S 150P-50 CH
C352	87-012-154-089		C-CAP,S 150P-50 CH
C451	87-012-140-089		C-CAP,S 470P-50 CH
C452	87-012-140-089		C-CAP,S 470P-50 CH
C453	87-010-178-089		C-CAP,S 1000P-50 B
C454	87-010-178-089		C-CAP,S 1000P-50<EXCEPT HE,LH,HR,G>
C455	87-010-178-089		C-CAP,S 1000P-50<EXCEPT HE,LH,HR,G>
C456	87-010-260-089		CAP,E 47-25 SME
C457	87-010-197-089		C-CAP,S 0.01-25 B
C458	87-010-183-089		C-CAP,S 2700P-50 B
C459	87-010-183-089		C-CAP,S 2700P-50 B
C460	87-010-183-089		C-CAP,S 2700P-50 B
C470	87-010-196-089		C-CAP,S 0.1-25 F
C501	87-010-177-089		C-CAP,S 820P-50 SL<EXCEPT K>
C502	87-010-177-089		C-CAP,S 820P-50 SL<EXCEPT K>
C504	87-012-155-089		C-CAP,S 180P-50 CH<EXCEPT K>
C505	87-012-155-089		C-CAP,S 180P-50 CH<EXCEPT K>
C506	87-010-197-089		C-CAP,S 0.01-25<EXCEPT HE,LH,HR,G>
C515	87-010-545-089		CAP,E 0.22-50 SME<EXCEPT K>
C516	87-010-545-089		CAP,E 0.22-50 SME<EXCEPT K>
C519	87-010-196-089		C-CAP,S 0.1-25 F<EXCEPT K>
C521	87-010-197-089		C-CAP,S 0.01-25 B
C522	87-010-312-089		C-CAP,S 15P-50 CH<K>
C522	87-010-318-089		C-CAP,S 47P-50 CH<EXCEPT K>
C523	87-010-197-089		C-CAP,S 0.01-25 B
C524	87-010-402-089		CAP,E 2.2-50 SME
C529	87-010-197-089		C-CAP,S 0.01-25<EXCEPT HE,LH,HR,G>
C530	87-010-194-089		C-CAP,S 0.047-25 F
C531	87-010-545-089		CAP,E 0.22-50 SME
C532	87-010-382-089		CAP,E 22-25 SME
C533	87-010-404-089		CAP,E 4.7-50 SME
C534	87-010-404-089		CAP,E 4.7-50 SME
C535	87-010-404-089		CAP,E 4.7-50 SME
C536	87-010-404-089		CAP,E 4.7-50 SME
C537	87-018-209-089		CAP,TC-U 0.1-50 F
C538	87-010-384-089		CAP,E 100-25 SME
C539	87-010-197-089		C-CAP,S 0.01-25<EXCEPT HE,LH,HR,G>
C540	87-010-196-089		C-CAP,S 0.1-25 F
C541	87-010-196-089		C-CAP,S 0.1-25 F
C543	87-010-546-089		CAP,E 0.33-50 SME
C544	87-010-546-089		CAP,E 0.33-50 SME
C545	87-010-400-089		CAP,E 0.47-50 SME<EXCEPT K>
C545	87-010-401-089		CAP,E 1-50 SME<K>
C546	87-010-400-089		CAP,E 0.47-50 SME<EXCEPT K>
C546	87-010-401-089		CAP,E 1-50 SME<K>
C547	87-010-213-089		C-CAP,S 0.015-50 B<EZ,EEZ,EE>
C547	87-010-220-089		C-CAP,S 0.018-25 B<HE,LH,HR,G>
C548	87-010-213-089		C-CAP,S 0.015-50 B<EZ,EEZ,EE>
C548	87-010-220-089		C-CAP,S 0.018-25 B<HE,LH,HR,G>
C549	87-018-209-089		CAP,TC-U 0.1-50 F

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C551	87-010-182-089		C-CAP,S 2200P-50 B<LH>
C552	87-010-182-089		C-CAP,S 2200P-50 B<LH>
C554	87-010-197-089		C-CAP,S 0.01-25<EXCEPT HE,LH,HR,G>
C557	87-010-177-089		C-CAP,S 820P-50 SL
C558	87-010-177-089		C-CAP,S 820P-50 SL
C641	87-010-196-089		C-CAP,S 0.1-25 F
C642	87-010-196-089		C-CAP,S 0.1-25 F
C664	87-010-318-089		C-CAP,S 47P-50<EXCEPT HE,LH,HR,G>
C665	87-010-318-089		C-CAP,S 47P-50<EXCEPT HE,LH,HR,G>
C701	87-010-381-089		CAP,E 330-16 SME
C702	87-010-404-089		CAP,E 4.7-50 SME
C703	87-010-197-089		C-CAP,S 0.01-25 B
C704	87-010-197-089		C-CAP,S 0.01-25 B
C711	87-010-263-089		CAP,E 100-10 SME 5X11
C712	87-010-196-089		C-CAP,S 0.1-25 F
C722	87-010-311-089		C-CAP,S 12P-50 CH
C723	87-010-178-089		C-CAP,S 1000P-50 B
C725	87-010-178-089		C-CAP,S 1000P-50 B
C727	87-010-196-089		C-CAP,S 0.1-25 F
C728	87-010-248-089		CAP,E 220-10 SME
C731	87-010-197-089		C-CAP,S 0.01-25<EXCEPT HE,LH,HR,G>
C732	87-018-134-089		CAP,TC-U 0.01-16<EXCEPT HE,LH,HR,G>
C770	87-010-405-089		CAP,E 10-50 SME
C771	87-010-405-089		CAP,E 10-50 SME
C772	87-010-194-089		C-CAP,S 0.047-25 F
C773	87-010-196-089		C-CAP,S 0.1-25 F
C774	87-010-263-089		CAP,E 100-10 SME 5X11
C775	87-010-405-089		CAP,E 10-50 SME
C776	87-010-197-089		C-CAP,S 0.01-25 B
C777	87-010-400-089		CAP,E 0.47-50 SME
C778	87-010-401-089		CAP,E 1-50 SME
C779	87-010-401-089		CAP,E 1-50 SME
C780	87-010-197-089		C-CAP,S 0.01-25 B
C781	87-010-405-089		CAP,E 10-50 SME<EXCEPT K>
C782	87-010-405-089		CAP,E 10-50 SME<EXCEPT K>
C787	87-010-184-089		C-CAP,S 3300P-50 B<EXCEPT K>
C788	87-010-184-089		C-CAP,S 3300P-50 B<EXCEPT K>
C789	87-012-365-089		C-CAP,S 0.027-25V BK<K>
C789	87-010-179-089		C-CAP,S 1200P-50 B<EXCEPT K>
C790	87-012-365-089		C-CAP,S 0.027-25V BK<K>
C790	87-010-179-089		C-CAP,S 1200P-50 B<EXCEPT K>
C791	87-010-401-089		CAP,E 1-50 SME
C792	87-010-180-089		C-CAP,S 1500P-50 B<HE,LH,HR,G>
C792	87-010-181-089		C-CAP,S 1800P-50<EXCEPT HE,LH,HR,G>
C793	87-010-189-089		C-CAP,S 8200P-50 B
C794	87-010-408-089		CAP,E 47-50 SME
C795	87-010-194-089		C-CAP,S 0.047-25 F
C796	87-010-403-089		CAP,E 3.3-50 SME
C797	87-010-405-089		CAP,E 10-50 SME
C798	87-010-196-089		C-CAP,S 0.1-25 F
C816	87-018-134-089		CAP,TC-U 0.01-16<EXCEPT HE,LH,HR,G>
C817	87-010-197-089		C-CAP,S 0.01-25 B
C818	87-010-197-089		C-CAP,S 0.01-25 B
C819	87-010-197-089		C-CAP,S 0.01-25 B
C820	87-010-260-089		CAP,E 47-25 SME
C821	87-010-197-089		C-CAP,S 0.01-25 B
C822	87-010-197-089		C-CAP,S 0.01-25 B
C823	87-010-197-089		C-CAP,S 0.01-25 B
C824	87-018-214-089		CAP,TC-U 0.1-50 F
C826	87-010-196-089		C-CAP,S 0.1-25 F
C827	87-010-196-089		C-CAP,S 0.1-25 F
C828	87-010-197-089		C-CAP,S 0.01-25 B
C830	87-015-819-089		CHIP CAP 0.01
C831	87-010-197-089		C-CAP,S 0.01-25 B
C835	87-010-197-089		C-CAP,S 0.01-25 B
C840	87-010-197-089		C-CAP,S 0.01-25<EXCEPT HE,LH,HR,G>
C901	87-010-401-089		CAP,E 1-50 SME<HE,HR>
C902	87-010-178-089		C-CAP,S 1000P-50 B<HE,HR>
C903	87-010-178-089		C-CAP,S 1000P-50 B<HE,HR>
C904	87-010-184-089		C-CAP,S 3300P-50 B<HE,HR>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C905	87-010-177-089		C-CAP,S 820P-50 SL<HE,HR>
C906	87-010-178-089		C-CAP,S 1000P-50 B<HE,HR>
C907	87-010-185-089		C-CAP,S 3900P-50 B<HE,HR>
C909	87-010-175-089		C-CAP,S 560P-50 SL<HE,HR>
C910	87-010-176-089		C-CAP,S 680P-50 SL<HE,HR>
C911	87-010-196-089		C-CAP,S 0.1-25 F<HE,HR>
C918	87-010-186-089		C-CAP,S 4700P-50 B<HE,HR>
C920	87-010-374-089		CAP,E 47-10<HE,HR>
C921	87-010-263-089		CAP,E 100-10 SME 5X11<HE,HR>
C922	87-010-196-089		C-CAP,S 0.1-25 F<HE,HR>
C923	87-010-154-089		C-CAP,S 10P-50 CH<HE,HR>
C924	87-010-154-089		C-CAP,S 10P-50 CH<HE,HR>
C941	87-010-197-089		C-CAP,S 0.01-25<EXCEPT HE,LH,HR,G>
C942	87-010-311-089		C-CAP,S 12P-50<EXCEPT HE,LH,HR,G>
C944	87-010-154-089		C-CAP,S 10P-50<EXCEPT HE,LH,HR,G>
C945	87-014-050-089		CAP,PP 510P-100<EXCEPT HE,LH,HR,G>
C947	87-010-401-089		CAP,E 1-50 SME
C948	87-010-196-089		C-CAP,S 0.1-25<EXCEPT HE,LH,HR,G>
C949	87-010-197-089		C-CAP,S 0.01-25 B
C950	87-010-322-089		C-CAP,S 100P-50<EXCEPT HE,LH,HR,G>
C951	87-010-401-089		CAP,E 1-50 SME
C952	87-010-311-089		C-CAP,S 12P-50<HE,LH,HR,G>
C983	87-010-544-089		CAP,E 0.1-50
C987	87-010-196-089		C-CAP,S 0.1-25 F
C988	87-015-785-089		C-CAP,0.1-25 F
C990	87-010-197-089		C-CAP,S 0.01-25 B
C995	87-010-197-089		C-CAP,S 0.01-25 B
CF801	87-008-423-019		CF,SFE10.7 MS3G-A<EXCEPT HE,LH,HR,G>
CF801	87-008-261-019		FLTR,SFE10.7MA5-A<HE,LH,HR,G>
CF802	82-785-747-019		CF,MS2 GHY,R<EXCEPT HE,LH,HR,G>
CF802	87-008-261-019		FLTR,SFE10.7MA5-A<HE,LH,HR,G>
FFE801	85-NF5-605-019		FE PACK 2 EX<HE,LH,HR,G>
FFE801	85-NF5-604-019		FE PACK 4 (AL)<EXCEPT HE,LH,HR,G>
J250	87-099-678-019		JACK,6.3 W/S BLK
J253	87-099-830-019		JACK,3P BLK W/E (JT)
J254	87-033-227-019		TERMINAL,SP 4P R (Z)
J652	87-099-741-019		JACK,PIN 2P (JT)
J801	87-033-235-019		TERMINAL,ANT (H)<HE,LH,HR,G>
J801	87-033-230-019		TERM,ANT AJ-2016<EXCEPT HE,LH,HR,G>
L201	87-005-366-019		COIL, IUH<EXCEPT HE,LH,HR,G>
L202	87-005-366-019		COIL, IUH<EXCEPT HE,LH,HR,G>
L403	81-598-635-010		COIL TRAP BIAS
L404	81-598-635-010		COIL TRAP BIAS
L451	87-007-342-019		COIL,OSC 85K BIAS
L701	87-006-235-019		COIL,TRAP MPX<EXCEPT K>
L702	87-006-235-019		COIL,TRAP MPX<EXCEPT K>
L741	87-006-259-019		COIL,FM DET
L742	82-NT1-659-019		FLTR,CFAZ-450 2NT
L770	87-005-849-089		COIL,10UH
L832	87-005-847-089		COIL,2.2UH
L941	87-006-261-019		COIL,LW ANT<EXCEPT HE,LH,HR,G>
L942	87-006-260-019		COIL,LW OSC<EXCEPT HE,LH,HR,G>
L981	81-MX4-620-019		AM PACK 3,S<HE,LH,HR,G>
L981	81-MX4-619-019		AM PACK 4<EXCEPT HE,LH,HR,G>
R105	87-022-050-089		RESIS METAL 1W-0.22J
R106	87-022-050-089		RESIS METAL 1W-0.22J
R203	87-022-391-089		RES,M/F 0.47-1W
R204	87-022-391-089		RES,M/F 0.47-1W
R205	87-022-391-089		RES,M/F 0.47-1W
R206	87-022-391-089		RES,M/F 0.47-1W
RY101	87-045-371-019		RELAY,AJW5211813
RY102	87-045-386-019		RELAY,JQ1-12V
SFR005	87-024-175-089		SFR,47K DIA6 V<EXCEPT K>
SFR006	87-024-175-089		SFR,47K DIA6 V<EXCEPT K>
SFR301	87-024-174-089		SFR33K DIA6 V<EXCEPT K>
SFR301	87-024-428-089		SFR,220K RH063EC<K>
SFR302	87-024-174-089		SFR33K DIA6 V<EXCEPT K>
SFR302	87-024-428-089		SFR,220K RH063EC<K>
SFR303	87-024-174-089		SFR33K DIA6 V<EXCEPT K>
SFR303	87-024-428-089		SFR,220K RH063EC<K>

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SFR304	87-024-174-089		SFR33K DIA6 V<EXCEPT K>
SFR304	87-024-428-089		SFR,220K RH063EC<K>
SFR451	87-024-175-089		SFR,47K DIA6 V
SFR452	87-024-175-089		SFR,47K DIA6 V
SFR722	87-024-171-089		SFR 4.7K DIA6<HE,LH,HR,G>
SFR722	87-024-651-089		SFR 6.8K DIA6<EXCEPT HE,LH,HR,G>
TC701	87-011-253-089		TRIMER,30P LAR
TC942	87-011-253-089		TRIMER,30PLAR<EXCEPT HE,LH,HR,G>
VR651	82-NF5-660-019		VR 50K BX2 RK14K 12A<EXCEPT K>
W101	84-MA1-683-019		F-CABLE 7P-2.5
W604	83-NF5-647-019		CABLE FFC 6P-1.25
X703	84-508-618-019		VIB,CER CSB 456 F/5
X721	87-030-372-019		VIB,XTAL 7.2MHZ
X901	87-030-348-089		VIB,CER 16.0MHZ CST<HE,HR>
FRONT C.B			
C220	87-010-404-089		CAP,E 4.7-50 SME
C221	87-010-404-089		CAP,E 4.7-50 SME
C222	87-010-408-049		CAP-E 47-50 SME
C223	87-010-405-089		CAP,E 10-50 SME
C224	87-010-401-049		CAP,E 1-50 SME
C225	87-010-263-089		CAP,E 100-10 SME 5X11
C226	87-010-401-089		CAP,E 1-50 SME
C227	87-010-248-049		CAP,E 220-10 SME
C228	87-010-805-089		C-CAP,S 1-16F
C229	87-010-174-089		C-CAP,S 470P-50 SL
C245	87-010-316-089		C-CAP,S 33P-50 CH
C246	87-010-313-089		C-CAP,S 18P-50 CH
C247	87-010-316-089		C-CAP,S 33P-50 CH
C248	87-010-178-089		C-CAP,S 1000P-50 B
C302	87-010-198-089		C-CAP,S 0.022-25 B
C381	87-010-196-089		C-CAP,S 0.1-25 F
C382	87-010-196-089		C-CAP,S 0.1-25 F
C383	87-010-196-089		C-CAP,S 0.1-25 F
C384	87-010-196-089		C-CAP,S 0.1-25 F
C390	87-010-196-089		C-CAP,S 0.1-25 F
C401	87-010-545-089		CAP,E 0.22-50 SME
C402	87-010-178-089		C-CAP,S 1000P-50 B
C508	87-010-384-049		CAP,E 100-25 SME
C552	87-010-184-089		C-CAP,S 3300P-50 B
C553	87-010-184-089		C-CAP,S 3300P-50 B
C554	87-010-184-089		C-CAP,S 3300P-50 B
C555	87-010-184-089		C-CAP,S 3300P-50 B
C556	87-010-180-089		C-CAP,S 1500P-50 B
C557	87-010-374-049		CAP,E 47-10
C558	87-010-180-089		C-CAP,S 1500P-50 B
C559	87-010-197-089		C-CAP,S 0.01-25 B
C560	87-010-197-089		C-CAP,S 0.01-25 B
C561	87-010-193-089		C-CAP,S 0.033-25 F
C562	87-010-191-089		C-CAP,S 0.015-50 F
C563	87-010-404-089		CAP,E 4.7-50 SME
C564	87-010-404-089		CAP,E 4.7-50 SME
C565	87-010-384-089		CAP,E 100-25 SME
C566	87-010-197-089		C-CAP,S 0.01-25<EXCEPT HE,LH,HR,G>
C600	87-010-544-089		CAP,E 0.1-50
C601	87-010-322-089		C-CAP,S 100P-50CH
C602	87-010-196-089		C-CAP,S 0.1-25 F
C604	87-010-196-089		C-CAP,S 0.1-25 F
C607	87-010-401-089		CAP,E 1-50 SME<HE,HR>
C608	87-010-405-089		CAP,E 10-50 SME<HE,HR>
C611	87-010-322-089		C-CAP,S 100P-50<EXCEPT HE,LH,HR,G>
C616	87-010-401-089		CAP,E 1-50 SME
C617	87-010-196-089		C-CAP,S 0.1-25 F
C620	87-010-405-089		CAP,E 10-50 SME
C630	87-010-374-089		CAP,E 47-10
C640	87-010-248-049		CAP,E 220-10 SME
C650	87-010-260-089		CAP,E 47-25 SME
C651	87-010-401-089		CAP,E 1-50 SME
C652	87-010-401-089		CAP,E 1-50 SME

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C653	87-010-154-089		C-CAP,S 10P-50 CH
C654	87-010-154-089		C-CAP,S 10P-50 CH
C657	87-010-322-089		C-CAP,S 100P-50 CH
C658	87-010-322-089		C-CAP,S 100P-50 CH
C659	87-010-426-089		C-CAP,S 0.012-25 B
C660	87-010-426-089		C-CAP,S 0.012-25 B
C661	87-010-187-089		C-CAP,S 5600P-50 B
C662	87-010-187-089		C-CAP,S 5600P-50 B
C665	87-012-156-089		C-CAP,S 220P-50 CH
C666	87-012-156-089		C-CAP,S 220P-50 CH
C667	87-012-365-089		C-CAP,S 0.027-25V BK
C668	87-012-365-089		C-CAP,S 0.027-25V BK
C669	87-010-167-089		C-CAP,S 120P-50 SL
C670	87-010-167-089		C-CAP,S 120P-50 SL
C671	87-010-426-089		C-CAP,S 0.012-25 B
C672	87-010-426-089		C-CAP,S 0.012-25 B
C673	87-010-197-089		C-CAP,S 0.01-25 B
C674	87-010-197-089		C-CAP,S 0.01-25 B
C675	87-010-197-089		C-CAP,S 0.01-25 B
C676	87-010-197-089		C-CAP,S 0.01-25 B
C677	87-010-178-089		C-CAP,S 1000P-50 B
C678	87-010-178-089		C-CAP,S 1000P-50 B
C681	87-010-169-089		C-CAP,S 180P-50 SL
C682	87-010-169-089		C-CAP,S 180P-50 SL
C683	87-010-220-089		C-CAP,S 0.018-25 B
C684	87-010-220-089		C-CAP,S 0.018-25 B
C687	87-010-322-089		C-CAP,S 100P-50<EXCEPT HE,LH,HR,G>
C688	87-010-322-089		C-CAP,S 100P-50<EXCEPT HE,LH,HR,G>
C700	87-010-196-089		C-CAP,S 0.1-25 F<HE,HR>
C701	87-010-182-089		C-CAP,S 2200P-50 B<HE,HR>
C702	87-010-197-089		C-CAP,S 0.01-25 B<HE,HR>
C703	87-010-196-089		C-CAP,S 0.1-25 F<HE,HR>
C704	87-010-374-089		CAP,E 47-10<HE,HR>
C707	87-010-956-089		C-CAP,S 0.068-25 B<HE,HR>
C708	87-010-182-089		C-CAP,S 2200P-50 B<HE,HR>
C709	87-010-197-089		C-CAP,S 0.01-25 B<HE,HR>
C710	87-012-141-089		C-CAP,S 0.22-16 F<HE,HR>
C711	87-010-186-089		C-CAP,S 4700P-50 B<HE,HR>
C712	87-010-176-089		C-CAP,S 680P-50 SL<HE,HR>
C713	87-010-176-089		C-CAP,S 680P-50 SL<HE,HR>
C714	87-010-196-089		C-CAP,S 0.1-25 F<HE,HR>
C720	87-010-263-089		CAP,E 100-10 SME 5X11<HE,HR>
C850	87-018-125-089		CAP,TC-U330P-50<EXCEPT HE,LH,HR,G>
C851	87-010-452-089		C-CAP,1-16<EXCEPT HE,LH,HR,G>
C852	87-010-805-089		C-CAP,S 1-16<EXCEPT HE,LH,HR,G>
FL101	85-MA4-651-010		FL, BJ 377 GK
J600	87-099-659-019		JACK,6.3 JY-6314-01130
J601	87-099-659-019		JACK,6.3 JY-6314-01130
L700	87-005-454-089		COIL,680UH FLR50 K<HE,HR>
LED351	87-070-201-089		LED,SLP 9118C-51-S-T1
LED352	87-070-201-089		LED,SLP 9118C-51-S-T1
LED353	87-070-201-089		LED,SLP 9118C-51-S-T1
LED354	87-070-201-089		LED,SLP 9118C-51-S-T1
LED355	87-070-201-089		LED,SLP 9118C-51-S-T1
LED356	87-070-201-089		LED,SLP 9118C-51-S-T1
LED357	87-070-201-089		LED,SLP 9118C-51-S-T1
LED358	87-070-201-089		LED,SLP 9118C-51-S-T1
LED359	87-070-201-089		LED,SLP 9118C-51-S-T1
LED360	87-070-201-089		LED,SLP 9118C-51-S-T1
LED362	87-070-198-089		LED,SLP736A-81-S-T1
LED363	87-070-198-089		LED,SLP736A-81-S-T1
LED364	87-070-198-089		LED,SLP736A-81-S-T1
LED365	87-070-198-089		LED,SLP736A-81-S-T1
LED366	87-070-198-089		LED,SLP736A-81-S-T1
LED367	87-070-198-089		LED,SLP736A-81-S-T1
LED368	87-070-198-089		LED,SLP736A-81-S-T1
LED369	87-070-198-089		LED,SLP736A-81-S-T1
MVR801	85-MA4-654-119		VR,50KBX2 (M)
S306	87-036-215-089		SW,TACT EVQ21404M
S307	87-036-215-089		SW,TACT EVQ21404M

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S308	87-036-215-089		SW,TACT EVQ21404M
S309	87-036-215-089		SW,TACT EVQ21404M
S310	87-036-215-089		SW,TACT EVQ21404M
S311	87-036-215-089		SW,TACT EVQ21404M
S312	87-036-215-089		SW,TACT EVQ21404M
S313	87-036-215-089		SW,TACT EVQ21404M
S314	87-036-215-089		SW,TACT EVQ21404M
S315	87-036-215-089		SW,TACT EVQ21404M
S316	87-036-215-089		SW,TACT EVQ21404M
S317	87-036-215-089		SW,TACT EVQ21404M
S318	87-036-215-089		SW,TACT EVQ21404M
S319	87-036-215-089		SW,TACT EVQ21404M
S320	87-036-215-089		SW,TACT EVQ21404M
S321	87-036-215-089		SW,TACT EVQ21404M
S322	87-036-215-089		SW,TACT EVQ21404M
S323	87-036-215-089		SW,TACT EVQ21404M
S324	87-036-215-089		SW,TACT EVQ21404M
S325	87-036-215-089		SW,TACT EVQ21404M
S326	87-036-215-089		SW,TACT EVQ21404M
S327	87-036-215-089		SW,TACT EVQ21404M
S328	87-036-215-089		SW,TACT EVQ21404M<HE,HR>
S329	87-036-215-089		SW,TACT EVQ21404M<HE,HR>
S330	87-036-215-089		SW,TACT EVQ21404M
S331	87-036-215-089		SW,TACT EVQ21404M
VR600	81-MX4-637-019		VR 10KA RK11K1130
VR700	83-MA1-661-019		VR,SL 10KB<HE,HR>
W502	85-MA4-678-019		CABLE FFC 15P-1.25
W503	82-NF7-671-019		CABLE FFC 13P-1.25
W504	85-MA5-671-019		F-CABLE,2P-2.0
X201	87-030-416-089		VIB,CER FCR 4.19MS

MVR C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C800	87-010-196-089		C-CAP,S 0.1-25 F

CD KEY C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
S301	87-036-215-089		SW,TACT EVQ21404M
S302	87-036-215-089		SW,TACT EVQ21404M
S303	87-036-215-089		SW,TACT EVQ21404M
S304	87-036-215-089		SW,TACT EVQ21404M
S305	87-036-215-089		SW,TACT EVQ21404M

AC C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
R101	87-022-050-089		RESIS METAL 1W-0.22J
R102	87-022-050-089		RESIS METAL 1W-0.22J

PT C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
⚠CF001	87-033-213-089		CLAMP FUSE SMK
⚠CF002	87-033-213-089		CLAMP FUSE SMK
⚠F101	87-035-223-019		FUSE 1.25A'T'<G>
⚠F101	87-035-222-019		FUSE T 1A<EZ,EEZ,EE>
⚠F101	87-035-139-019		FUSE T 2.5A L<HE,LH,HR>
⚠F101	87-035-220-019		FUSE T630MA<K>
⚠F102	87-035-223-019		FUSE 1.25A'T'<LH>
⚠PT1	85-MA4-644-019		PT,5MA4 EZ<EZ,EEZ,EE>
⚠PT1	85-MA4-649-019		PT,5MA4 HE<HE,HR,G>
⚠PT1	85-MA4-643-019		PT,5MA4 K<K>
⚠PT1	85-MA4-642-019		PT,5MA4 LH<LH>
⚠SW101	87-036-387-019		SW,SL 1-2-3<HE,LH,HR>
⚠TER001	82-304-743-019		TERMINAL,1P
⚠TER002	82-304-743-019		TERMINAL,1P

DECK C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
SFR1	87-024-581-089		SFR,3.3K DIA 6H
SOL1	82-ZM1-618-310		SOL ASSY,27
SOL2	82-ZM1-626-310		SOL ASSY,27K
SW1	87-036-378-019		SW,PUSH 1-1-1 SH2

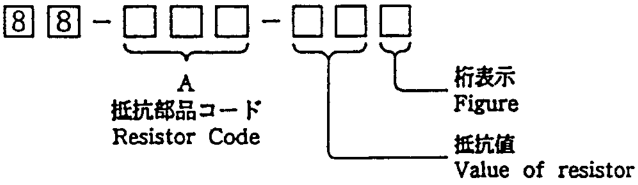
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
SW2	87-036-378-019		SW,PUSH 1-1-1 SH2
SW3	87-036-378-019		SW,PUSH 1-1-1 SH2
SW4	87-036-378-019		SW,PUSH 1-1-1 SH2
SW5	87-036-378-019		SW,PUSH 1-1-1 SH2
SW6	87-036-378-019		SW,PUSH 1-1-1 SH2
SW8	87-036-378-019		SW,PUSH 1-1-1 SH2

HEAD-1 C.B

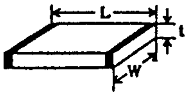
HEAD-2 C.B

Oチップ抵抗部品コード／CHIP RESISTOR PART CODE

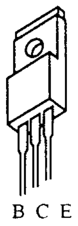
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding


8 8 - □□□ - □□□
A
抵抗部品コード
Resistor Code
桁表示
Figure
抵抗値
Value of resistor

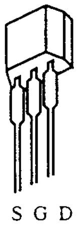
チップ抵抗
Chip resistor

Wattage 容量	Type 種類	Tolerance 許容誤差	Symbol 記号	Dimensions／寸法 (mm) Form/外形	L	W	t	Resistor Code : A 抵抗コード : A
1/32W	1608	±5%	CJ		1.6	0.8	0.35	108
1/10W	2125	±5%	CJ		2	1.25	1.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.5 ~0.7	128

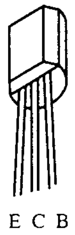
TRANSISTOR ILLUSTRATION



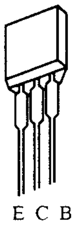
2SB1370E



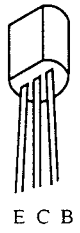
2SK352



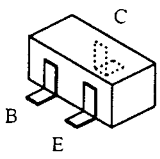
2SC3331T



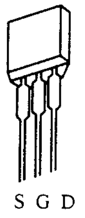
2SA933S
DTA114YS



2SA952K
2SA1318TU
2SA1296GR
2SC3266GR
KTA1266GR
KTC3198GR

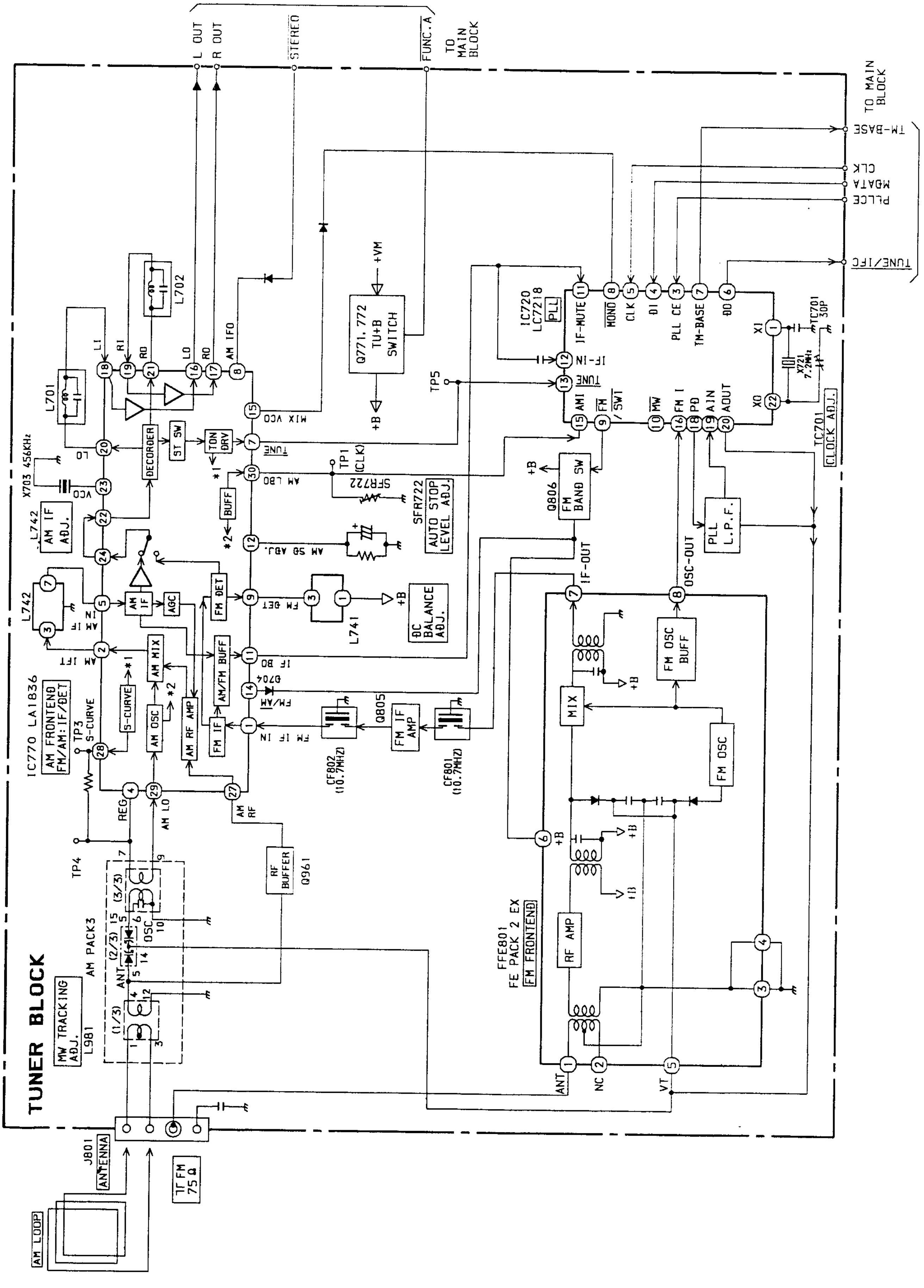


2SA1162GR
2SC2712GR/BL
2SC1714 (O)
2SC3326B
2SK543
DTA143EK
DTA144WK
DTC114YK
DTC144EK

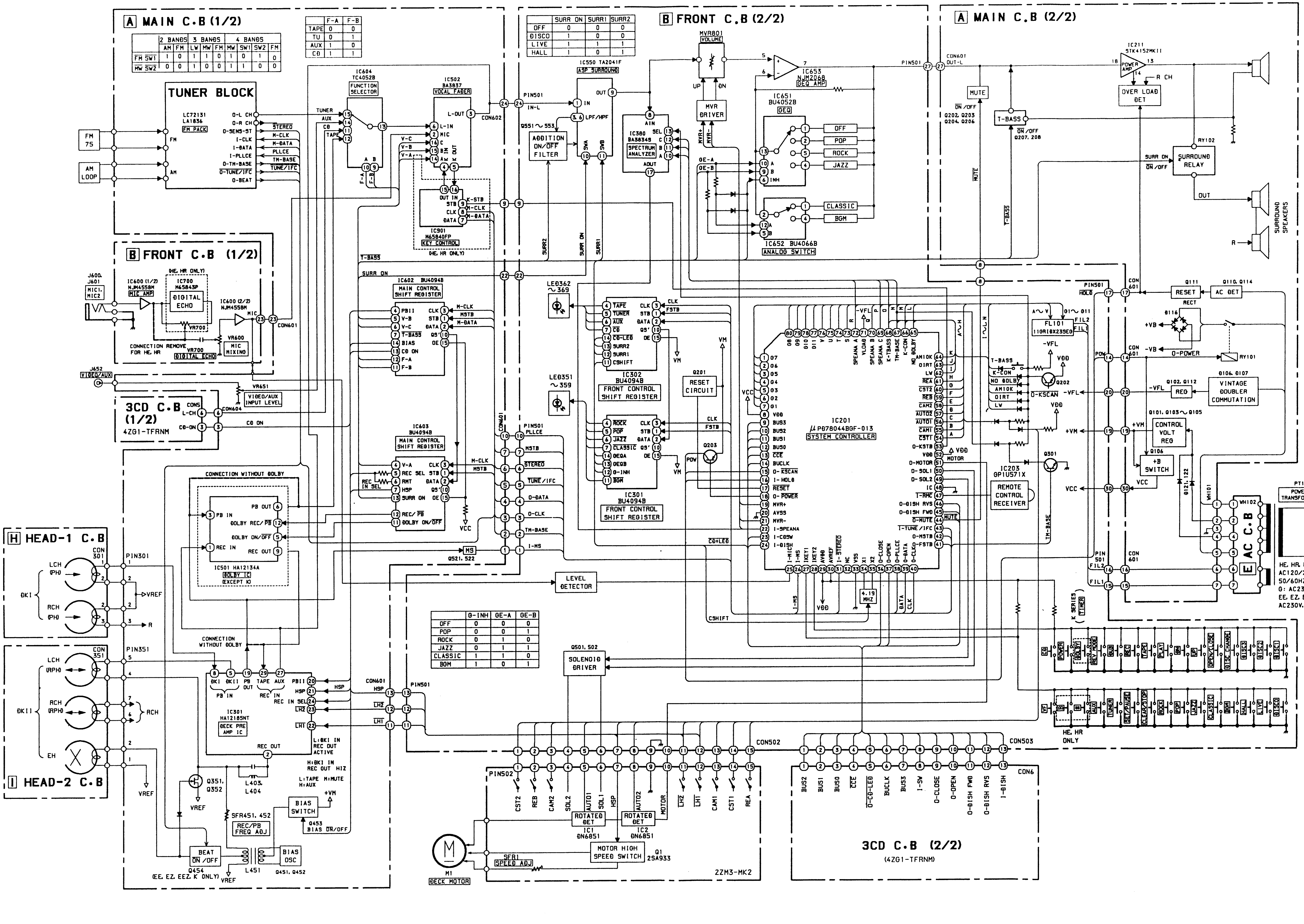


2SK365GR,BL

BLOCK DIAGRAM-1 (TUNER : HE,HR,LH,G)


TUNER BLOCK
L OUT
R OUT
STEREO
FUNC.A
TO MAIN BLOCK
TO MAIN BLOCK
TM-BASE
CLK
MDATA
PLLCE
TUNE/IFC
IC720
LC7218
PLL
IF-MUTE
MONO
CLK
DI
PLL CE
TM-BASE
DO
X1
TC701 30P
X721 7.2MHz
XO
TC701
CLOCK ADJ.
IF-IN
TUNE
AMI
FM/SWT
MW
FM I
PD
AIN
AOUT
TP5
Q771.772
TU+B
SWITCH
+VM
+B
IC770 LA1836
AM FRONTEND
FM/AM:IF/DET
X703 456KHz
L701
L702
LI
RI
RO
LO
RO
AM IFO
MIX VCO
LO
VCO
L742
AM IF ADJ.
L742
AM IFT
AM IF IN
DECORDER
ST SW
TON DRV
TUNE
BUFF
*1
*2
AM LBO
FM DET
AGC
AM IF
AM MIX
AM OSC
S-CURVE
AM RF AMP
FM IF
AM/FM BUFF
TP3
S-CURVE
TP4
REG
AM LO
AM RF
RF BUFFER
Q961
AM PACK3
L981
MW TRACKING ADJ.
ANT
OSC
TP1 (CLK)
SFR722
SFR722
AUTO STOP
LEVEL ADJ.
AM SD ADJ.
FM DET
L741
DC BALANCE ADJ.
IF DO
D704
FM/AM
FM IF IN
CF802 (10.7MHz)
Q805
FM IF AMP
CF801 (10.7MHz)
Q806
FM BAND SW
IF-OUT
OSC-OUT
PLL L.P.F.
FM OSC BUFF
MIX
FM OSC
RF AMP
FFE801
FE PACK 2 EX
FM FRONTEND
ANT
NC
VT
J801
ANTENNA
AM LOOP
FM 75Ω

BLOCK DIAGRAM-2 (MAIN / FRONT)


A MAIN C.B (1/2)
TUNER BLOCK
LC72131
LA1836
FM PACK
FM 75
AM LOOP
IC604 TC4052B
FUNCTION SELECTOR
IC502 BA3837
VOCAL FADER
IC901 M65840FP
KEY CONTROL
(HE, HR ONLY)
B FRONT C.B (1/2)
IC600 (1/2) NJM4558M
MIC AMP
IC700 M65843P
DIGITAL ECHO
IC600 (2/2) NJM4558M
VR600 MIC MIXING
VR700 DIGITAL ECHO
CONNECTION REMOVE FOR HE, HR
J652 VIDEO/AUX
VR651 VIDEO/AUX INPUT LEVEL
3CD C.B (1/2)
4ZG1-TFRNM
IC602 BU4094B
MAIN CONTROL SHIFT REGISTER
IC603 BU4094B
MAIN CONTROL SHIFT REGISTER
CONNECTION WITHOUT DOLBY
IC501 HA12134A
DOLBY IC
(EXCEPT K)
H HEAD-1 C.B
I HEAD-2 C.B
IC301 HA12185NT
DECK PRE AMP IC
BIAS SWITCH
SFR451, 452
REC/PB FREQ ADJ
BEAT ON/OFF
BIAS OSC
Q454 (EE, EZ, EEZ, K ONLY)
B FRONT C.B (2/2)
IC550 TA2041F
ASP SURROUND
ADDITION ON/OFF FILTER
MVR801 VOLUME
MVR DRIVER
IC653 NJM2068
GEQ AMP
IC651 BU4052B
GEQ
IC380 BA3834S
SPECTRUM ANALYZER
IC652 BU4066B
ANALOG SWITCH
OFF
POP
ROCK
JAZZ
CLASSIC
BGM
IC302 BU4094B
FRONT CONTROL SHIFT REGISTER
IC301 BU4094B
FRONT CONTROL SHIFT REGISTER
LED362 ~369
LED351 ~359
Q201 RESET CIRCUIT
IC201 μPD78044BGF-013
SYSTEM CONTROLLER
FL101 11DR10X239ED
IC203 GP1U571X
REMOTE CONTROL RECEIVER
LEVEL DETECTOR
Q501, 502 SOLENOID DRIVER
M1 DECK MOTOR
SFR1 SPEED ADJ
MOTOR HIGH SPEED SWITCH
ROTATED DET IC1 DN6851
ROTATED DET IC2 DN6851
Q1 2SA933
ZZM3-MK2
3CD C.B (2/2)
(4ZG1-TFRNM)
A MAIN C.B (2/2)
IC211 STK4152MKII
POWER AMP
OVER LOAD DET
MUTE
T-BASS
RY102 SURROUND RELAY
SURROUND SPEAKERS
Q111 RESET
Q110, Q114 AC DET
RY101
Q106 +B SWITCH
Q101, Q103~Q105 CONTROL VOLT REG
Q102, Q112 REG
Q106, Q107 VINTAGE DOUBLER COMMUTATION
E AC C.B
PT1 POWER TRANSFORMER
HE, HR, LH: AC120/220-230/240V 50/60HZ
G: AC230-240V, 50HZ
EE, EZ, EEZ, K: AC230V, 50HZ
K SERIES (TIMER)
HE, HR ONLY

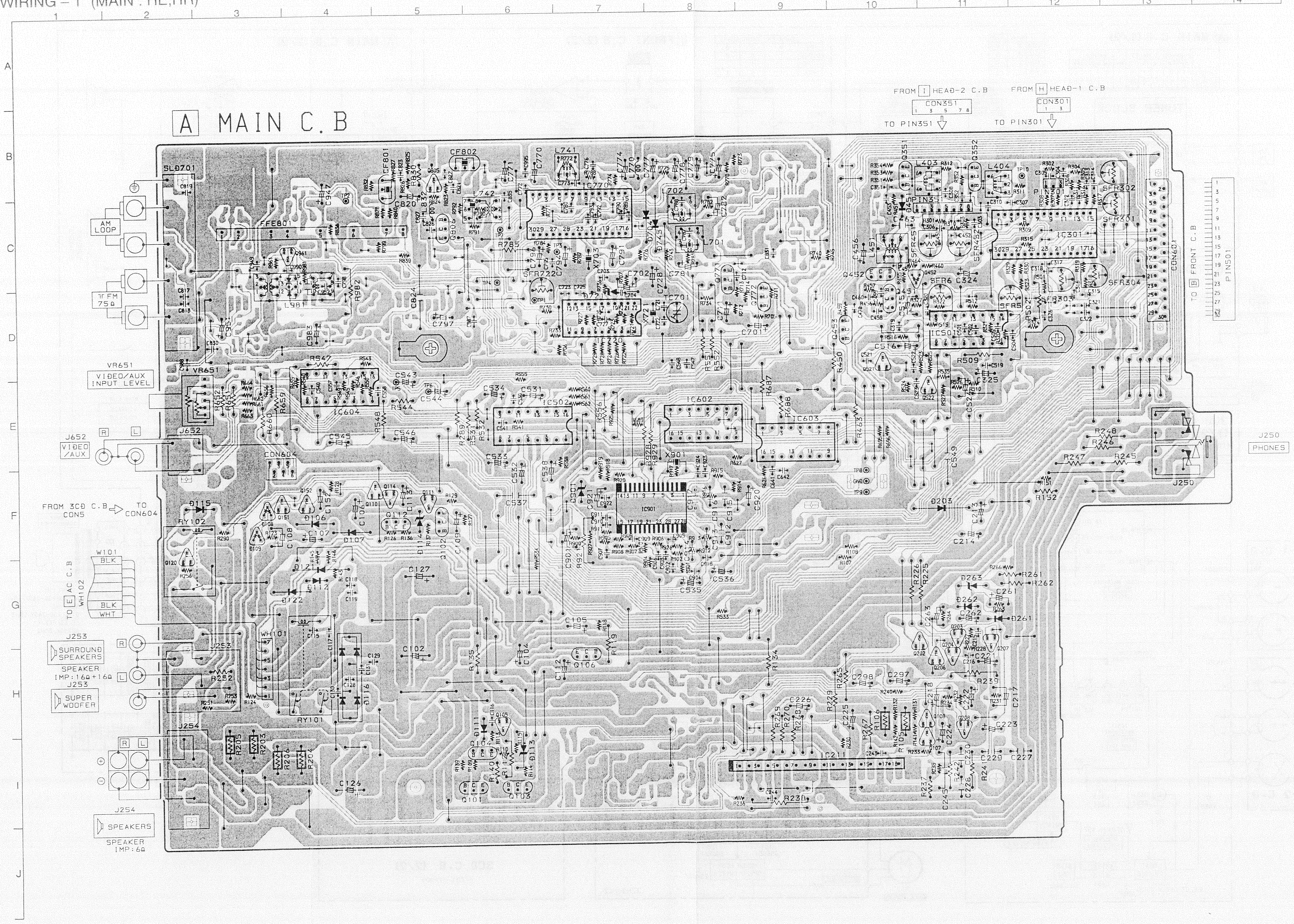
	2 BANDS		3 BANDS			4 BANDS			
	AM	FM	LW	MW	FM	MW	SW1	SW2	FM
FM SW1	1	0	1	1	0	1	0	1	0
MW SW2	0	0	1	0	0	1	1	0	0

	F-A	F-B
TAPE	0	0
TU	0	1
AUX	1	0
CD	1	1

	SURR ON	SURR1	SURR2
OFF	0	0	0
DISCO	1	0	0
LIVE	1	1	1
HALL	1	0	1

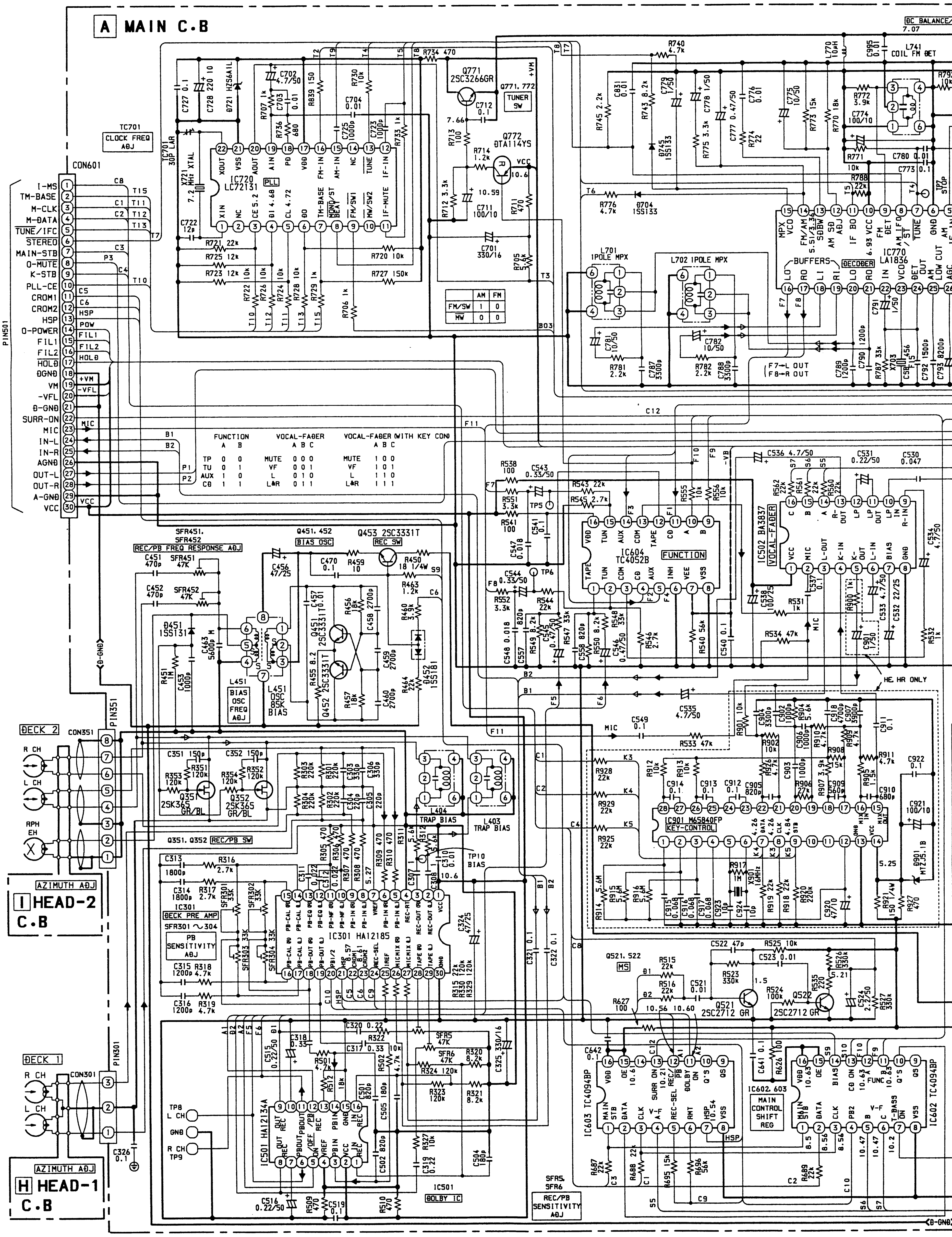
	G-INH	GE-A	GE-B
OFF	0	0	0
POP	0	0	1
ROCK	0	1	0
JAZZ	0	1	1
CLASSIC	1	1	0
BGM	1	0	1

WIRING – 1 (MAIN : HE,HR)



A MAIN C.B
AM LOOP
FM 75Ω
VR651
VIDEO/AUX INPUT LEVEL
J652
VIDEO /AUX
R
L
FROM 3CD C.B CON5
TO CON604
TO E AC C.B WH102
W101
BLK
WHT
J253
SURROUND SPEAKERS
SPEAKER IMP:16Ω+16Ω
J253
SUPER WOOFER
J254
SPEAKERS
SPEAKER IMP:6Ω
FROM I HEAD-2 C.B
CON351
TO PIN351
FROM H HEAD-1 C.B
CON301
TO PIN301
TO B FRONT C.B
PIN501
CON601
J250
PHONES
IC301
IC501
IC502
IC602
IC603
IC604
IC701
IC771
IC901
IC211
RY101
RY102
X701
X901
L741
L742
L403
L404
L981
CF801
CF802
FFE801
SFR301
SFR302
SFR304
SFR5
SFR6
SFR451
SFR452
CON604
WH101
SL0701
A
B
C
D
E
F
G
H
I
J
1
2
3
4
5
6
7
8
9
10
11
12
13
14

SCHEMATIC DIAGRAM-1 (MAIN : HE,HR)

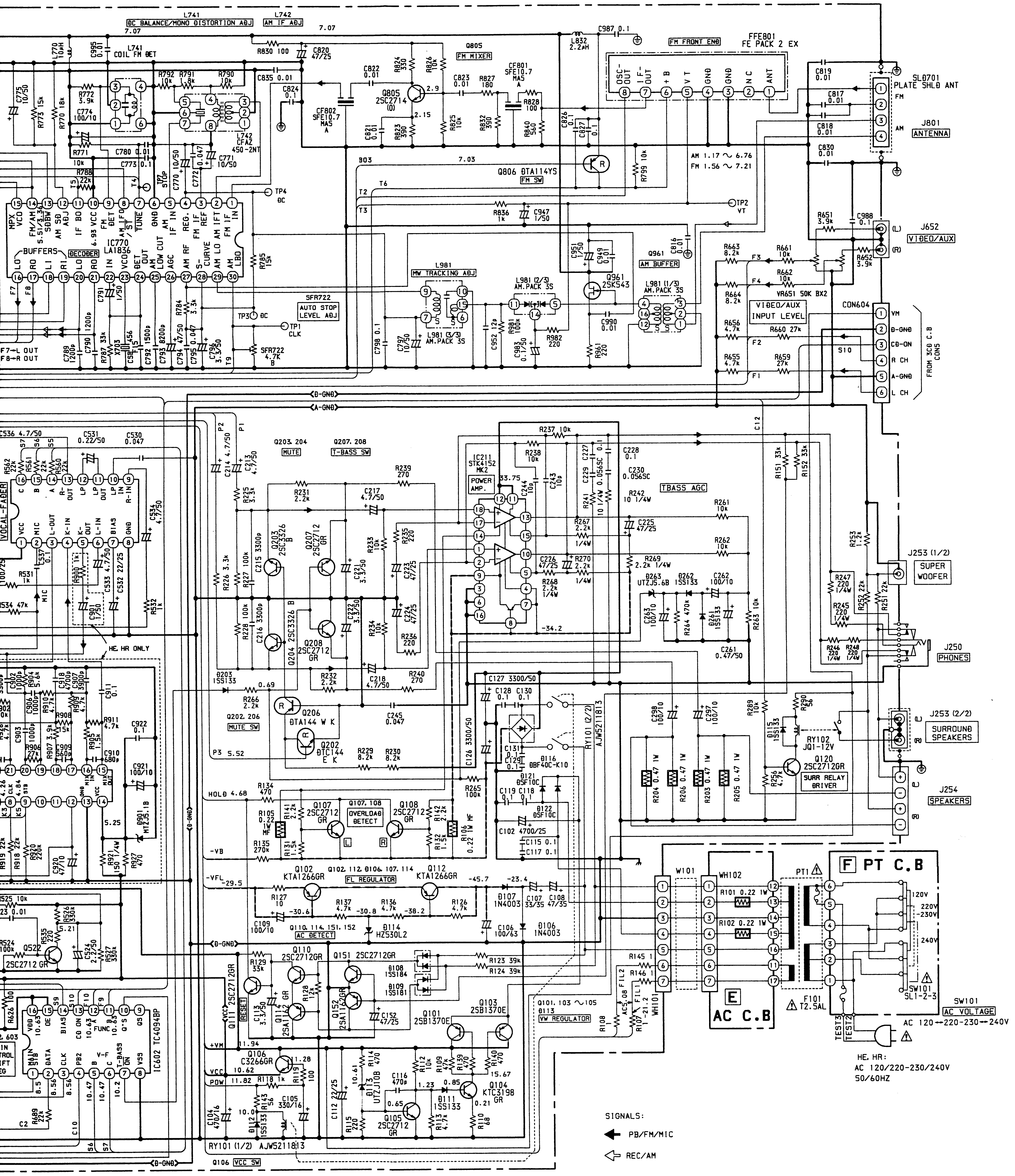

A MAIN C.B
CON601
TO B FRONT C.B PIN501
I-MS
TM-BASE
M-CLK
M-DATA
TUNE/IFC
STEREO
MAIN-STB
D-MUTE
K-STB
PLL-CE
CROM1
CROM2
HSP
D-POWER
FIL1
FIL2
HOLD
DGND
VM
-VFL
D-GND
SURR-ON
MIC
IN-L
IN-R
AGND
OUT-L
OUT-R
A-GND
VCC
TC701 CLOCK FREQ ADJ
IC720 LC72131 PLL
X721 7.2MHz XTAL
Q771 2SC3266GR
Q771, 772 TUNER SW
Q772 DTA114YS
L701 1POLE MPX
L702 1POLE MPX
IC770 LA1836
BUFFERS
DECODER
F7→L OUT
F8→R OUT
DC BALANCE
L741 COIL FM DET
IC604 TC4052B
FUNCTION
IC502 BA3837
VOCAL-FADER
HE, HR ONLY
IC901 M65840FP
KEY-CONTROL
X901 16MHz
D901 MTZJ5.1B
SFR451, SFR452
REC/PB FREQ RESPONSE ADJ
Q451, 452 BIAS OSC
Q453 2SC3331T REC SW
Q451 2SC3331T
Q452 2SC3331T
D451 1SS131
D452 1SS181
L451 BIAS OSC FREQ ADJ
L451 OSC 85K BIAS
L404 TRAP BIAS
L403 TRAP BIAS
TP10 BIAS
DECK 2
CON351
PIN351
R CH
L CH
RPH
EH
Q351 2SK365 GR/BL
Q352 2SK365 GR/BL
Q351, Q352 REC/PB SW
AZIMUTH ADJ
I HEAD-2 C.B
IC301 DECK PRE AMP
IC301 HA12185
SFR301~304 PB SENSITIVITY ADJ
DECK 1
CON301
PIN301
H HEAD-1 C.B
TP8 L CH
GND
R CH TP9
IC501 HA12134A
IC501 BOLBY IC
SFR5, SFR6 REC/PB SENSITIVITY ADJ
Q521, 522 MS
Q521 2SC2712 GR
Q522 2SC2712 GR
IC603 TC4094BP
IC602, 603 MAIN CONTROL SHIFT REG
IC602 TC4094BP
D-GND

FUNCTION	A	B
TP	0	0
TU	0	1
AUX	1	0
CD	1	1

VOCAL-FADER	A B C
MUTE	0 0 0
VF	0 0 1
L	0 1 0
L&R	0 1 1

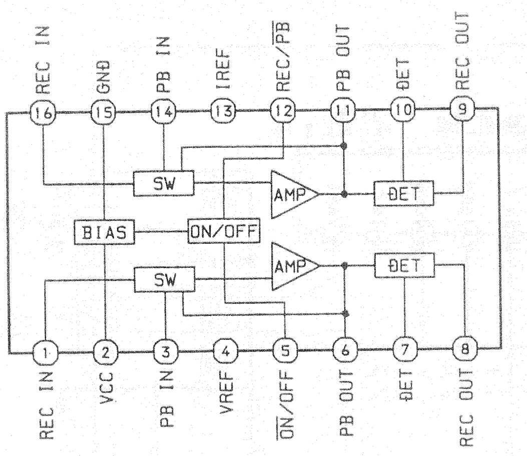
VOCAL-FADER (WITH KEY CON)	A B C
MUTE	1 0 0
VF	1 0 1
L	1 1 0
L&R	1 1 1

	AM	FM
FM/SW	1	0
MW	0	0

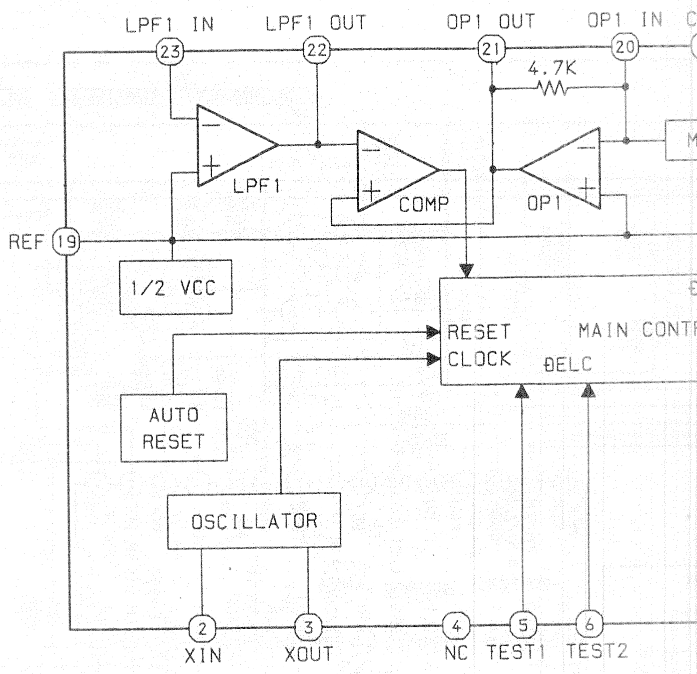

L741
DC BALANCE/MONO DISTORTION ADJ
L742
AM IF ADJ
L741 COIL FM DET
FM FRONT END
FFE801
FE PACK 2 EX
Q805
FM MIXER
Q805 2SC2714 (O)
CF801 SFE10.7 MA5 A
CF802 SFE10.7 MA5 A
L742 CFAZ 450-2NT
Q806 DTA114YS
FM SW
AM 1.17 ~ 6.76
FM 1.56 ~ 7.21
TP2 VT
TP4 DC
TP3 DC
TP1 CLK
SL0701 PLATE SHLD ANT
FM
AM
J801 ANTENNA
J652 VIDEO/AUX
(L)
(R)
IC770 LA1836
BUFFERS
DECODER
Q961 AM BUFFER
Q961 2SK543
L981 MW TRACKING ADJ
L981 (2/3) AM.PACK 3S
L981 (1/3) AM.PACK 3S
L981 (3/3) AM.PACK 3S
SFR722 AUTO STOP LEVEL ADJ
SFR722 4.7K B
VR651 50K BX2
VIDEO/AUX INPUT LEVEL
CON604
VM
D-GND
CD-ON
R CH
A-GND
L CH
FROM 3CD C.B CONS
F7-L OUT
F8-R OUT
B-GND
A-GND
VOCAL-FADER
Q203, 204 MUTE
Q207, 208 T-BASS SW
IC211 STK4152 MK2
POWER AMP.
TBASS AGC
HE, HR ONLY
Q202, 206 MUTE SW
Q206 DTA144 W K
Q202 DTC144 E K
Q107, 108 OVERLOAD DETECT
Q102, 112, D106, 107, 114 FL REGULATOR
Q102 KTA1266GR
Q112 KTA1266GR
Q110, 114, 151, 152 AC DETECT
D114 HZS30L2
D107 1N4003
D106 1N4003
RY101 (2/2) AJW5211813
RY101 (1/2) AJW5211813
Q101, 103 ~ 105 D113 VW REGULATOR
Q106 VCC SW
Q106 C3266GR
Q104 KTC3198 GR
Q105 2SC2712 GR
Q101 2SB1370E
Q103 2SB1370E
RESET
IC602 TC4094BP
J253 (1/2) SUPER WOOFER
J250 PHONES
J253 (2/2) SURROUND SPEAKERS
RY102 JQ1-12V
Q120 2SC2712GR
SURR RELAY DRIVER
J254 SPEAKERS
W101
WH102
PT1
F PT C.B
E AC C.B
F101 T2.5AL
SW101 SL1-2-3
SW101 AC VOLTAGE
AC 120→220→230→240V
120V
220V -230V
240V
HE, HR:
AC 120/220-230/240V
50/60HZ
SIGNALS:
PB/FM/MIC
REC/AM

IC BLOCK DIAGRAM-1

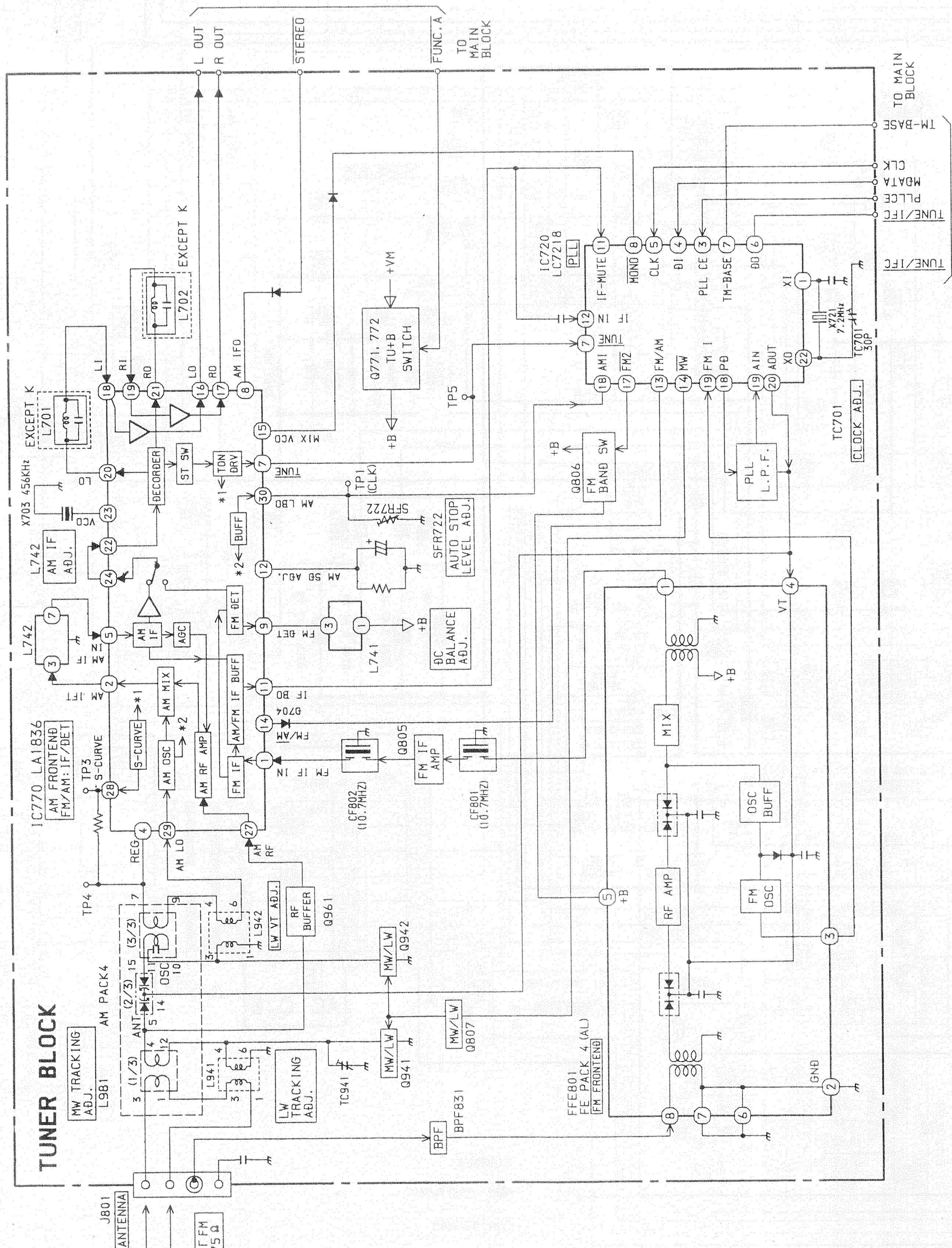
IC, HA12134A


REC IN
GND
PB IN
IREF
REC/PB
PB OUT
DET
REC OUT
SW
AMP
DET
BIAS
ON/OFF
SW
AMP
DET
REC IN
VCC
PB IN
VREF
ON/OFF
PB OUT
DET
REC OUT

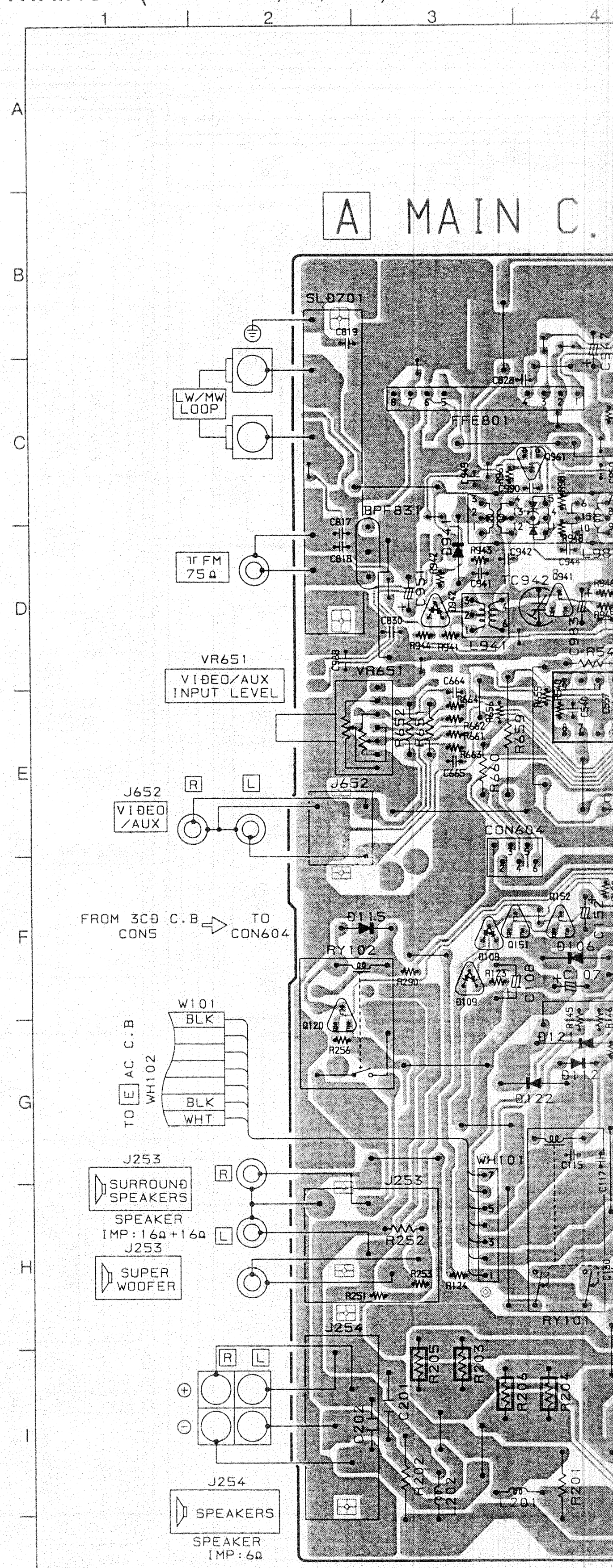
IC, M65843FP

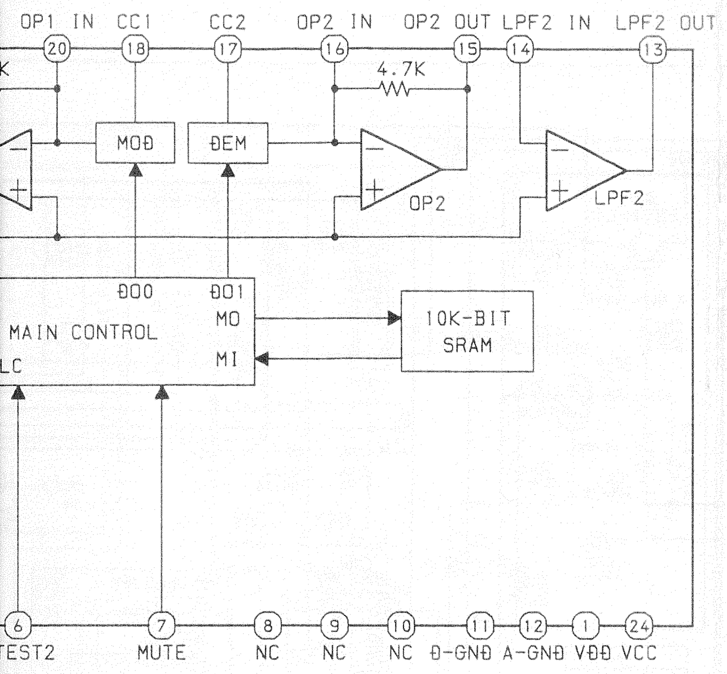

LPF1 IN
LPF1 OUT
OP1 OUT
OP1 IN
4.7K
LPF1
COMP
OP1
REF
1/2 VCC
RESET
CLOCK
MAIN CONTR
DELC
AUTO RESET
OSCILLATOR
XIN
XOUT
NC
TEST1
TEST2

BLOCK DIAGRAM-3 (TUNER : EE,EZ,EEZ,K)


TUNER BLOCK
L OUT
R OUT
STEREO
FUNC. A
TO MAIN BLOCK
TM-BASE
CLK
MDATA
PLLCE
TUNE/IFC
IC720 LC7218 PLL
IF-MUTE
MONO
CLK
DI
PLL CE
TM-BASE
DO
XI
XO
AOUT
AIN
PD
FM I
MW
FM/AM
FM2
AM1
IF IN
TUNE
X721 7.2MHz
TC701 30P
TC701 CLOCK ADJ.
PLL L.P.F.
Q771, 772 TU+B SWITCH
+VM
+B
TP5
Q806 FM BAND SW
TP1 (CLK)
SFR722
SFR722 AUTO STOP LEVEL ADJ.
DC BALANCE ADJ.
L741
EXCEPT K
L702
L701
X703 456kHz
L742 AM IF ADJ.
L742
IC770 LA1836 AM FRONTEND FM/AM: IF/DET
TP3 S-CURVE
TP4
DECORDER
ST SW
TON DRV
BUFF
FM DET
AM IF
AGC
AM MIX
AM OSC
S-CURVE
AM RF AMP
FM IF
AM/FM IF
AM/FM IF BUFF
MIX VCO
AM LBO
AM SD ADJ.
FM DET
IF BO
FM/AM
D704
FM IF IN
VCO
AM IFT
REG
AM LO
AM RF
CF802 (10.7MHz)
CF801 (10.7MHz)
Q805 FM IF AMP
FFE801 FE PACK 4(AL) FM FRONTEND
MIX
OSC BUFF
FM OSC
RF AMP
VT
GND
AM PACK4
L981 MW TRACKING ADJ.
OSC
ANT
L942 LW VT ADJ.
Q961 RF BUFFER
L941
LW TRACKING ADJ.
TC941
Q941 MW/LW
Q942 MW/LW
Q807 MW/LW
BPF831 BPF
J801 ANTENNA
AM LOOP
FM 75Ω

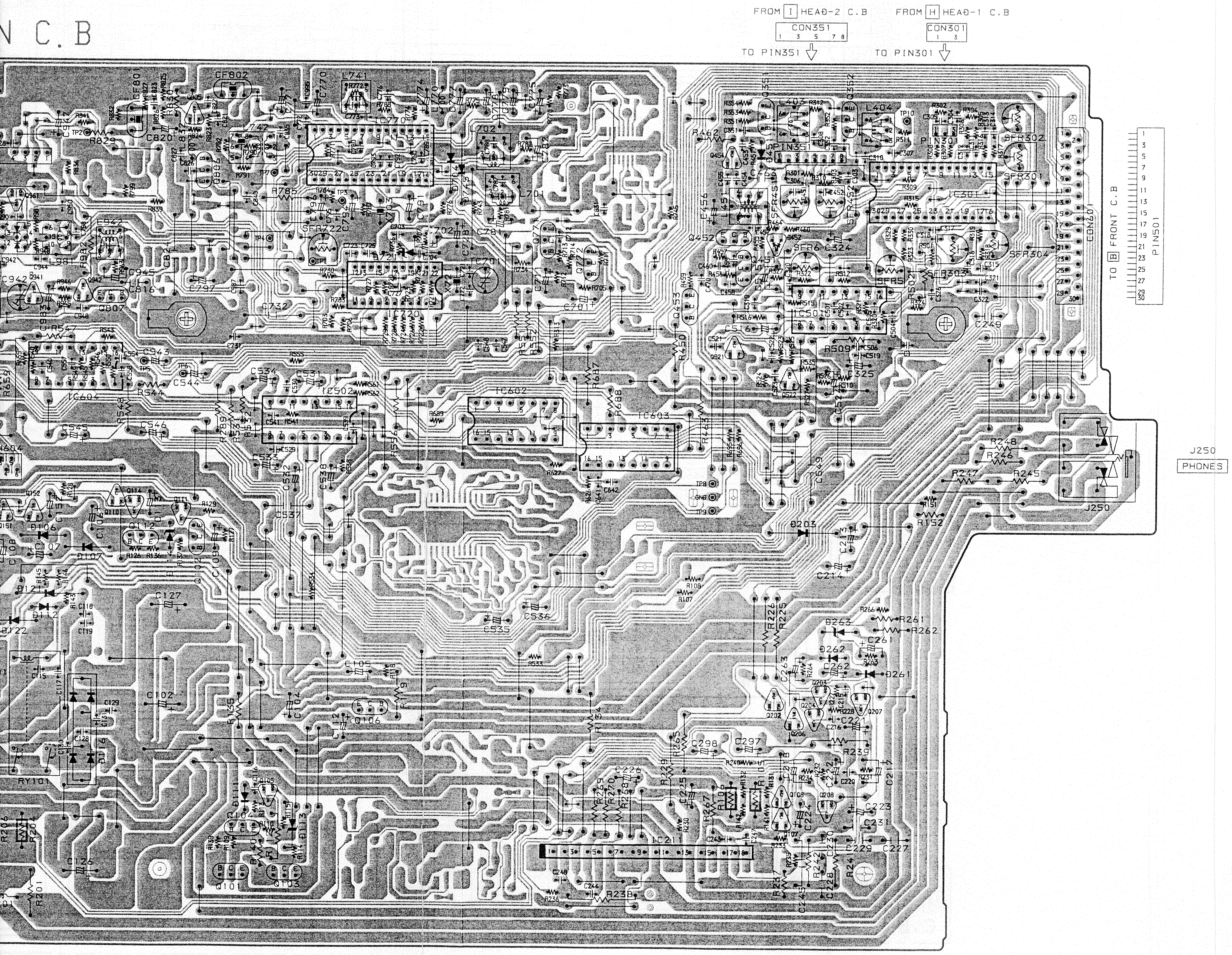
WIRING-2 (MAIN : EE,EZ,EEZ)


1
2
3
4
A
B
C
D
E
F
G
H
I
J
A MAIN C.
SLD701
LW/MW LOOP
FFE801
BPF831
FM 75Ω
VR651 VIDEO/AUX INPUT LEVEL
J652
R
L
VIDEO /AUX
J652
CON604
FROM 3CD C.B CONS
TO CON604
RY102
W101
BLK
TO E AC C.B WH102
BLK
WHT
WH101
J253
J253 SURROUND SPEAKERS
SPEAKER IMP:16Ω+16Ω
J253 SUPER WOOFER
J254
R
L
J254 SPEAKERS
SPEAKER IMP:6Ω

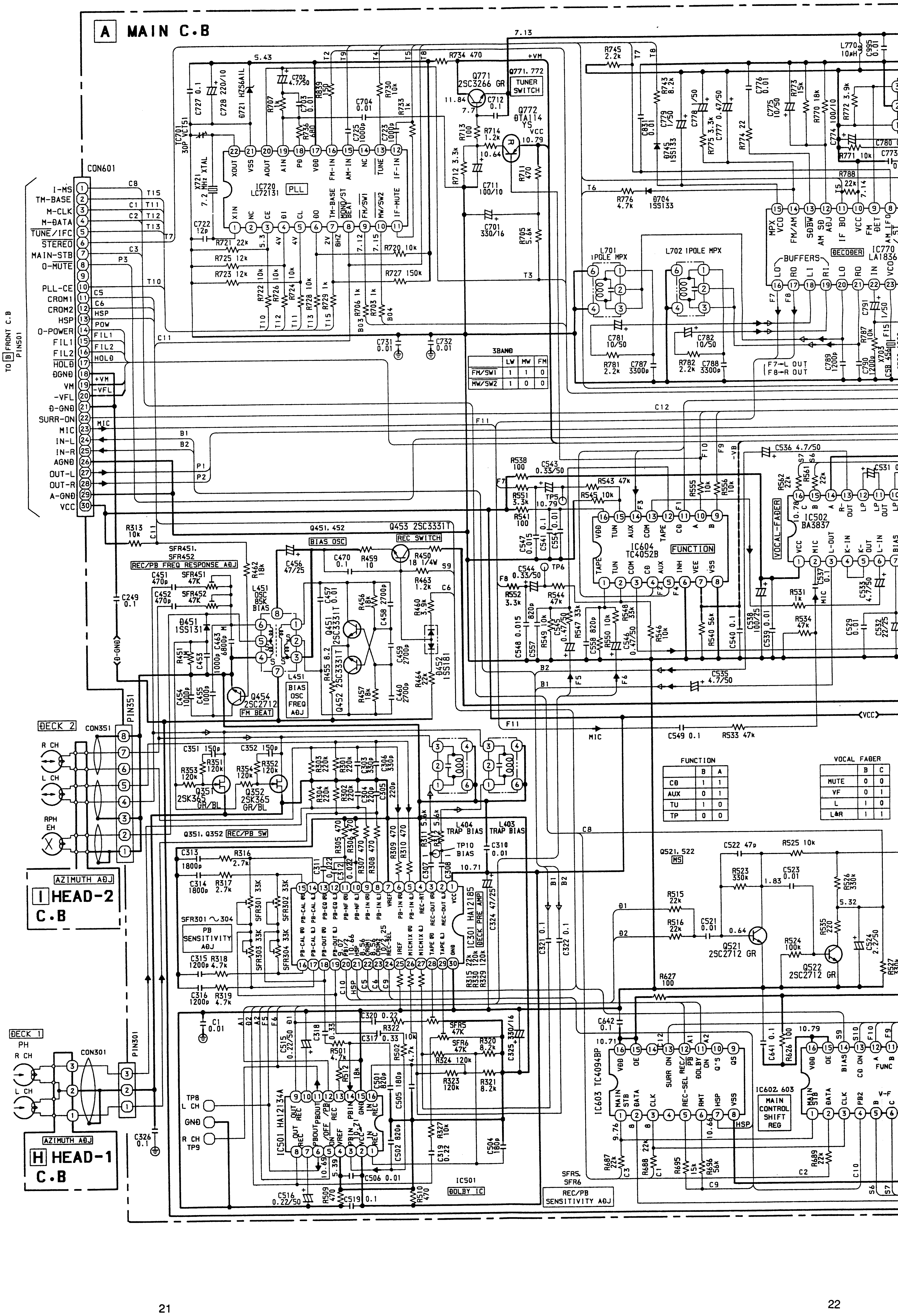

OP1 IN
CC1
CC2
OP2 IN
OP2 OUT
LPF2 IN
LPF2 OUT
20
18
17
16
15
14
13
4.7K
MOD
DEM
OP2
LPF2
D00
D01
MAIN CONTROL
MO
MI
10K-BIT
SRAM
LC
6
TEST2
7
MUTE
8
NC
9
NC
10
NC
11
D-GND
12
A-GND
1
VDD
24
VCC

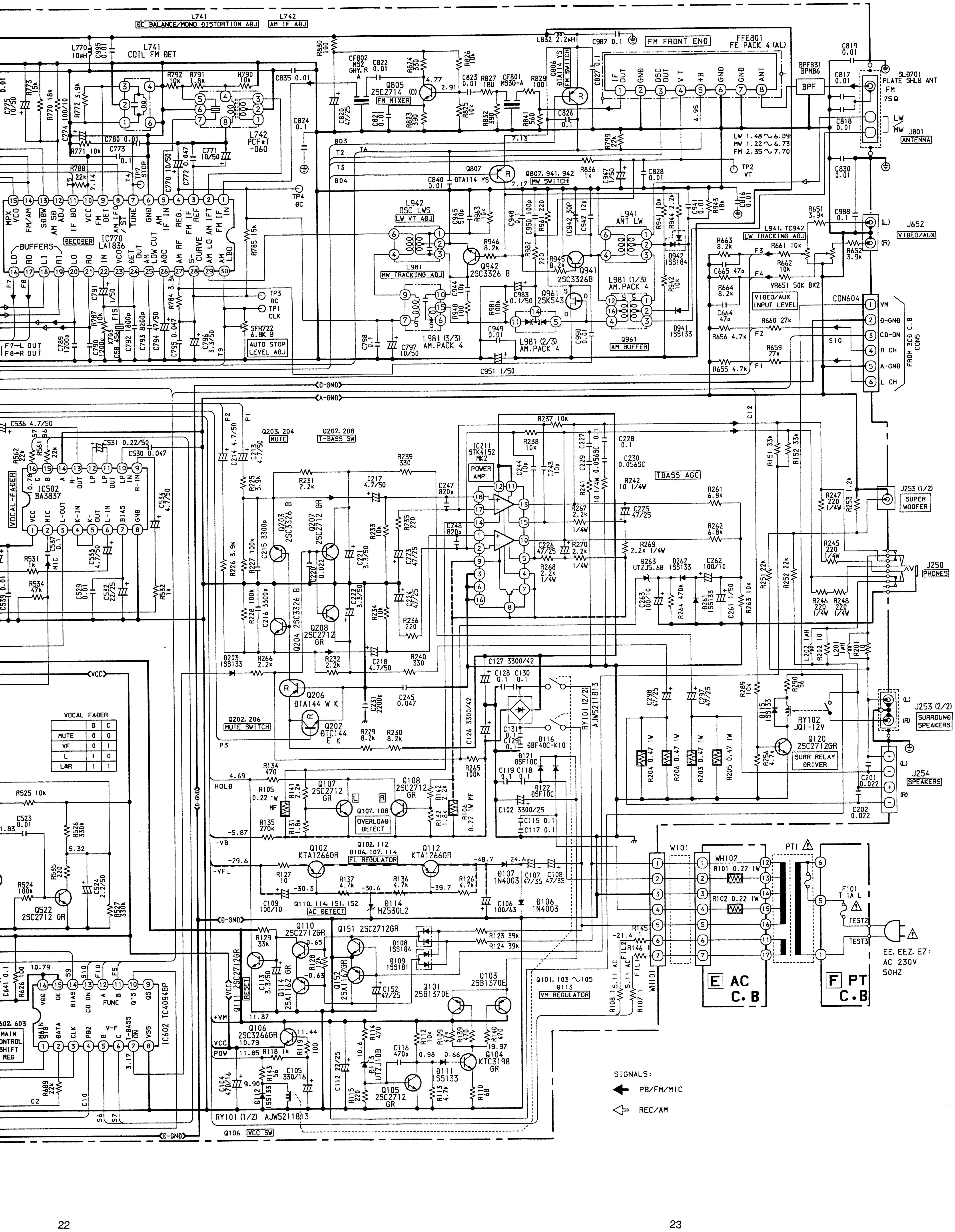
4 5 6 7 8 9 10 11 12 13 14

N C.B


FROM I HEAD-2 C.B
CON351
1 3 5 7 8
TO PIN351
FROM H HEAD-1 C.B
CON301
1 3
TO PIN301
TO B FRONT C.B
PIN501
CON601
J250
PHONES
IC301
IC501
IC502
IC602
IC603
IC604
IC701
IC702
IC201
CF801
CF802
L741
L404
SFR301
SFR302
SFR303
SFR304
PIN301
PIN351
R248
R246
R247
R245
R152
D203
C214
C249
C535
C536
RY101
Q101
Q103
R238

SCHEMATIC DIAGRAM-2 (MAIN : EE,EZ,EEZ)

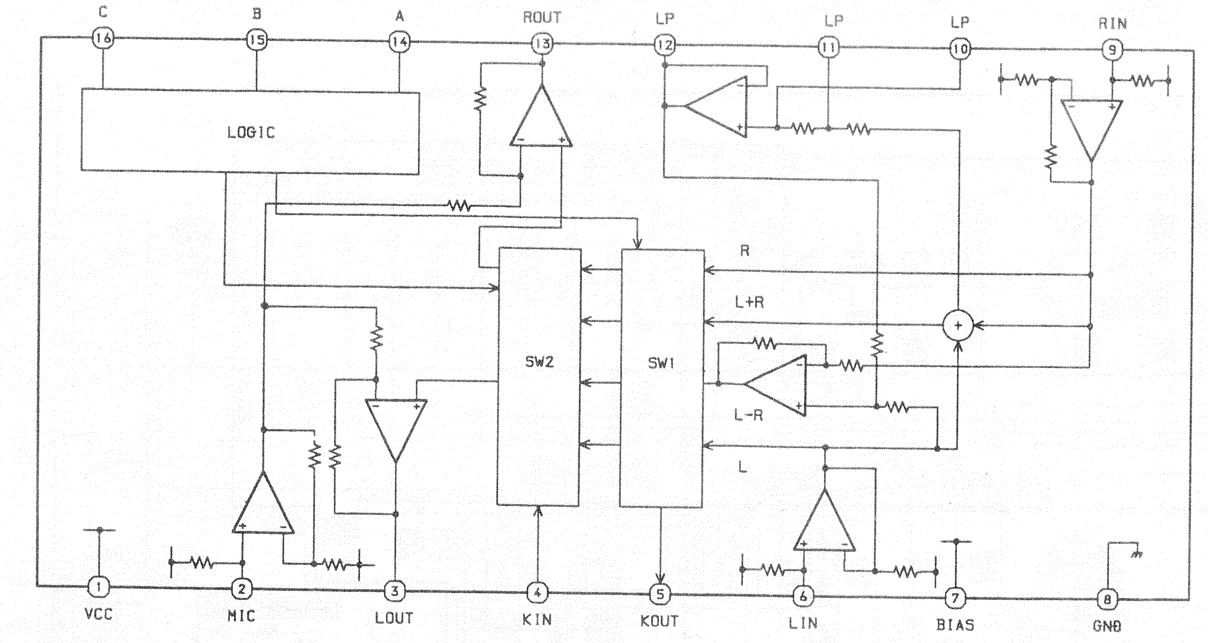

A MAIN C.B
CON601
TO B FRONT C.B PIN501
I-MS
TM-BASE
M-CLK
M-DATA
TUNE/IFC
STEREO
MAIN-STB
D-MUTE
PLL-CE
CROM1
CROM2
HSP
D-POWER
FIL1
FIL2
HOLD
DGND
VM
-VFL
D-GND
SURR-ON
MIC
IN-L
IN-R
AGND
OUT-L
OUT-R
A-GND
VCC
IC720 LC72131
PLL
X721 7.2 MHz XTAL
Q771 2SC3266 GR
Q771, 772 TUNER SWITCH
Q772 DTA114 YS
L701 1POLE MPX
L702 1POLE MPX
3BAND
LW MW FM
FM/SW1 1 1 0
MW/SW2 1 0 0
IC770 LA1836
BUFFERS
DECODER
F7→L OUT
F8→R OUT
IC604 TC4052B
FUNCTION
IC502 BA3837
VOCAL-FADER
Q451, 452 BIAS OSC
Q453 2SC3331T REC SWITCH
SFR451, SFR452 REC/PB FREQ RESPONSE ADJ
L451 OSC 85K BIAS
L451 BIAS OSC FREQ ADJ
Q454 2SC2712 FM BEAT
Q451 2SC3331T
Q452 2SC3331T
D451 1SS131
D452 1SS181
DECK 2
CON351
PIN351
R CH
L CH
RPH EH
Q351, Q352 REC/PB SW
Q351 2SK365 GR/BL
Q352 2SK365 GR/BL
L404 TRAP BIAS
L403 TRAP BIAS
TP10 BIAS
IC301 HA12185 DECK PRE AMP
SFR301 ~ 304 PB SENSITIVITY ADJ
AZIMUTH ADJ
I HEAD-2 C.B
DECK 1
PH
CON301
PIN301
AZIMUTH ADJ
H HEAD-1 C.B
TP8 L CH
GND
R CH TP9
IC501 HA12134A
IC501 DOLBY IC
SFR5, SFR6 REC/PB SENSITIVITY ADJ
FUNCTION
B A
CD 1 1
AUX 0 1
TU 1 0
TP 0 0
VOCAL FADER
B C
MUTE 0 0
VF 0 1
L 1 0
L&R 1 1
Q521, 522 MS
Q521 2SC2712 GR
Q522 2SC2712 GR
IC603 TC4094BP
IC602, 603 MAIN CONTROL SHIFT REG
MIC
VCC



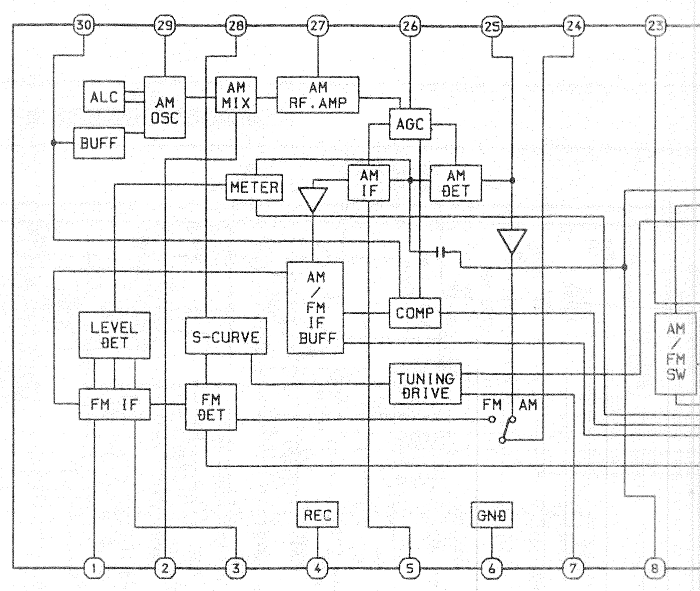
L741 ƉC BALANCE/MONO ƉISTORTION AƉJ
L742 AM IF AƉJ
L741 COIL FM ƉET
L742 PCF■T -060
FM FRONT ENƉ
FFE801 FE PACK 4 (AL)
IF OUT
GNƉ
OSC OUT
V T
+B
ANT
Q805 2SC2714 (O) FM MIXER
CF802 M52 GHY.R
CF801 M53G-A
Q806 ƉTA114 YS FM SWITCH
BPF831 BPMB6
BPF
SLƉ701 PLATE SHLƉ ANT
FM 75Ω
LW MW
J801 ANTENNA
LW 1.48～6.09
MW 1.22～6.73
FM 2.35～7.70
TP2 VT
TP4 ƉC
Q807 ƉTA114 YS
Q807, 941, 942 MW SWITCH
L942 OSC LWS LW VT AƉJ
L981 MW TRACKING AƉJ
Q942 2SC3326 B
Q941 2SC3326B
L941 ANT LW
Ɖ942 1SS184
L981 (1/3) AM.PACK 4
L981 (2/3) AM.PACK 4
L981 (3/3) AM.PACK 4
Q961 2SK543
Q961 AM BUFFER
Ɖ941 1SS133
L941, TC942 LW TRACKING AƉJ
J652 VIƉEO/AUX
VR651 50K BX2
VIƉEO/AUX INPUT LEVEL
CON604
VM
Ɖ-GNƉ
CƉ-ON
R CH
A-GNƉ
L CH
FROM 3CƉ C.B CON5
IC770 LA1836
MPX VCO
FM/AM
SƉBW
AM SƉ AƉJ
IF BO
VCC
FM ƉET
AM LFO / ST
TUNE
GNƉ
AM LOW CUT
AM IF IN
REG.
FM IF REF
FM IN
ƉECOƉER
BUFFERS
LO RO LI RI
LO RO
ƉET OUT
AGC
AM RF
S-CURVE
AM LO
AM IFT
LBO
TP3 ƉC
TP1 CLK
SFR722 6.8K B
AUTO STOP LEVEL AƉJ
F7→L OUT
F8→R OUT
<Ɖ-GNƉ>
<A-GNƉ>
IC502 BA3837
VOCAL-FAƉER
VOCAL FAƉER
B C
MUTE 0 0
VF 0 1
L 1 0
L&R 1 1
Q203, 204 MUTE
Q207, 208 T-BASS SW
Q203 2SC3326 B
Q204 2SC3326 B
Q207 2SC2712 GR
Q208 2SC2712 GR
IC211 STK4152 MK2
POWER AMP.
TBASS AGC
Ɖ203 1SS133
Q206 ƉTA144 W K
Q202 ƉTC144 E K
Q202, 206 MUTE SWITCH
Ɖ263 UTZJ5.6B
Ɖ262 1SS133
Ɖ261 1SS133
J253 (1/2) SUPER WOOFER
J250 PHONES
J253 (2/2) SURROUNƉ SPEAKERS
J254 SPEAKERS
RY102 JQ1-12V
Q120 2SC2712GR
SURR RELAY ƉRIVER
Ɖ115 1SS133
RY101 (2/2) AJW5211813
Ɖ116 ƉBF40C-K10
Ɖ121 ƉSF10C
Ɖ122 ƉSF10C
Q107 2SC2712 GR
Q108 2SC2712 GR
Q107, 108 OVERLOAƉ ƉETECT
HOLƉ
<VCC>
Q102 KTA1266GR
Q112 KTA1266GR
Q102, 112 Ɖ106, 107, 114 FL REGULATOR
Ɖ107 1N4003
Ɖ106 1N4003
Q110, 114, 151, 152 AC ƉETECT
Ɖ114 HZ530L2
Q110 2SC2712GR
Q151 2SC2712GR
Q114 2SA1162 GR
Q152 2SA1162GR
Ɖ108 1SS184
Ɖ109 1SS181
Q101 2SB1370E
Q103 2SB1370E
Q101, 103～105 Ɖ113 VM REGULATOR
Q106 2SC3266GR
Q104 KTC3198 GR
Q105 2SC2712 GR
Ɖ113 UTZJ10B
Ɖ111 1SS133
Ɖ112 1SS133
RY101 (1/2) AJW5211813
Q106 VCC SW
RESET
Q111 2SC2712GR
Q522 2SC2712 GR
IC602 TC4094BP
MAIN STB
ƉATA
CLK
PB2
V-F
T-BASS ON
VSS
VƉƉ
OE
BIAS
CƉ ON
FUNC
Q'S
QS
602, 603 MAIN CONTROL SHIFT REG
W101
WH101
WH102
R101 0.22 1W
R102 0.22 1W
PT1 ⚠
F101 T 1A L ⚠
TEST2
TEST3
E AC C.B
F PT C.B
EE, EEZ, EZ: AC 230V 50HZ
SIGNALS:
PB/FM/MIC
REC/AM

IC BLOCK DIAGRAM-2

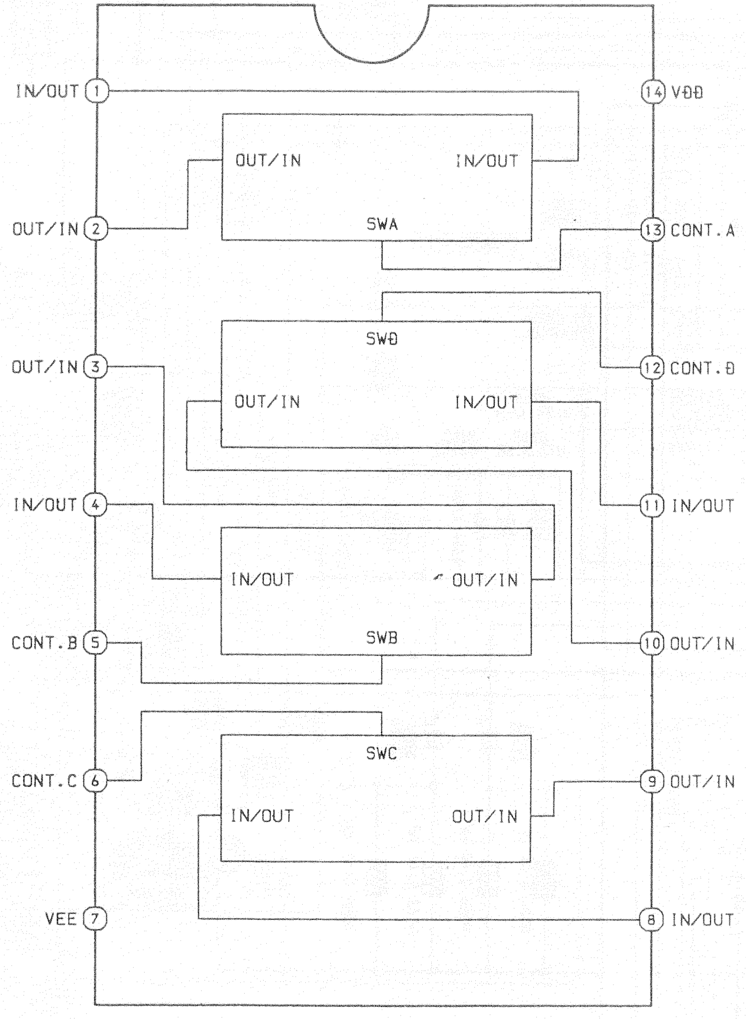
IC, BA3837


C
B
A
ROUT
LP
LP
LP
RIN
16
15
14
13
12
11
10
9
LOGIC
R
L+R
SW2
SW1
L-R
L
1
2
3
4
5
6
7
8
VCC
MIC
LOUT
KIN
KOUT
LIN
BIAS
GND

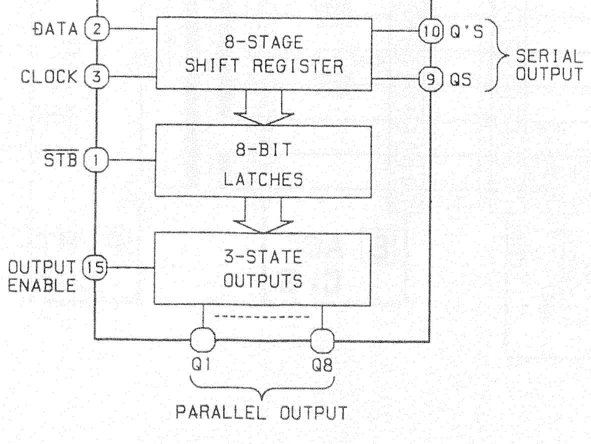
IC, LA1836


30
29
28
27
26
25
24
23
ALC
AM OSC
AM MIX
AM RF.AMP
AGC
BUFF
METER
AM IF
AM DET
AM / FM IF BUFF
COMP
LEVEL DET
S-CURVE
TUNING DRIVE
AM / FM SW
FM IF
FM DET
FM
AM
REC
GND
1
2
3
4
5
6
7
8

IC, BU4066


IN/OUT 1
OUT/IN 2
OUT/IN 3
IN/OUT 4
CONT.B 5
CONT.C 6
VEE 7
14 VDD
13 CONT.A
12 CONT.D
11 IN/OUT
10 OUT/IN
9 OUT/IN
8 IN/OUT
OUT/IN
IN/OUT
SWA
SWD
OUT/IN
IN/OUT
IN/OUT
OUT/IN
SWB
SWC
IN/OUT
OUT/IN

IC, BU4094B
IC, BU4094BF

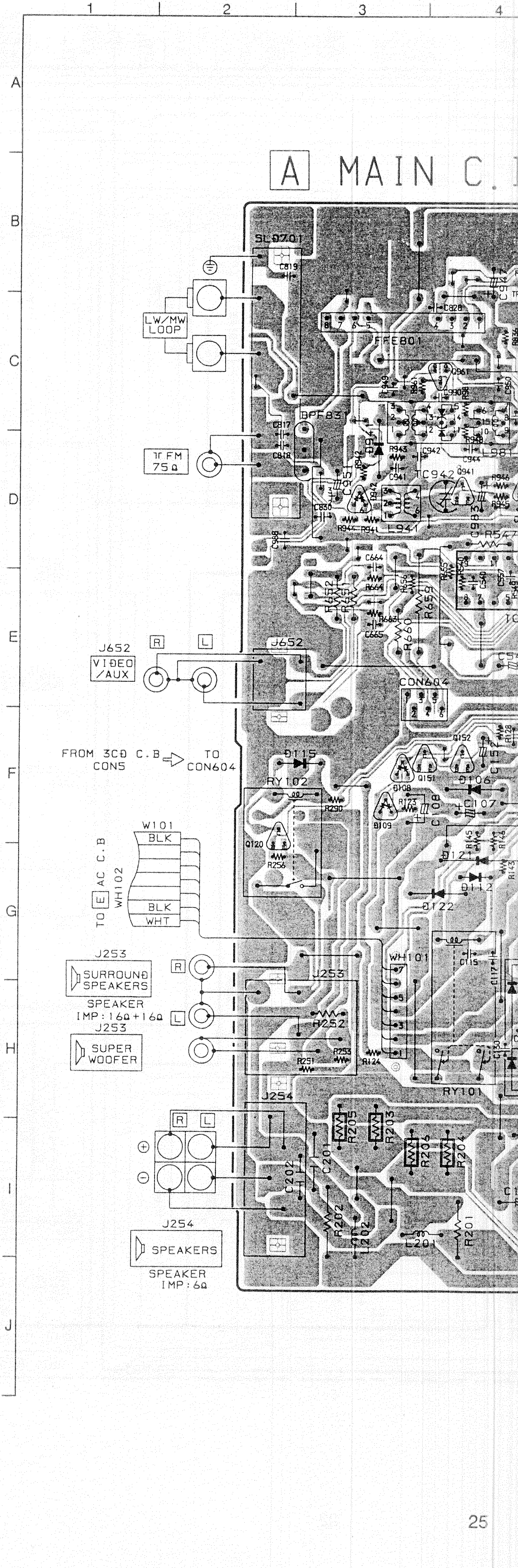

DATA 2
CLOCK 3
STB 1
OUTPUT ENABLE 15
8-STAGE SHIFT REGISTER
8-BIT LATCHES
3-STATE OUTPUTS
10 Q'S
9 QS
SERIAL OUTPUT
Q1
Q8
PARALLEL OUTPUT

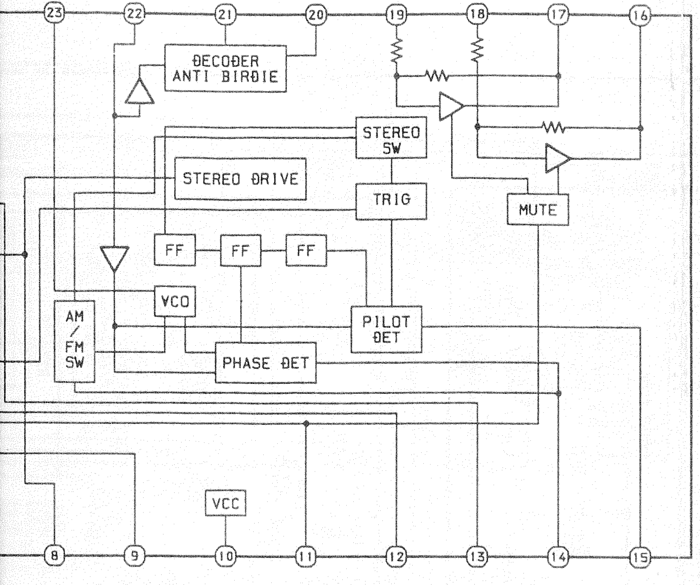
TRUTH TABLE

CLOCK	OUTPUT ENABLE	STROBE	DATA	PARALLEL OUTPUTS		SERIAL OUTPUTS	
				Q1	Qn	QS	Q'S
↑	L	X	X	Z	Z	Q7	NO CHG.
↓	L	X	X	Z	Z	NO CHG.	QS
↑	H	L	X	NO CHG.	NO CHG.	Q7	NO CHG.
↑	H	H	L	L	Qn-1	Q7	NO CHG.
↑	H	H	H	H	Qn-1	Q7	NO CHG.
↓	H	X	X	NO CHG.	NO CHG.	NO CHG.	QS

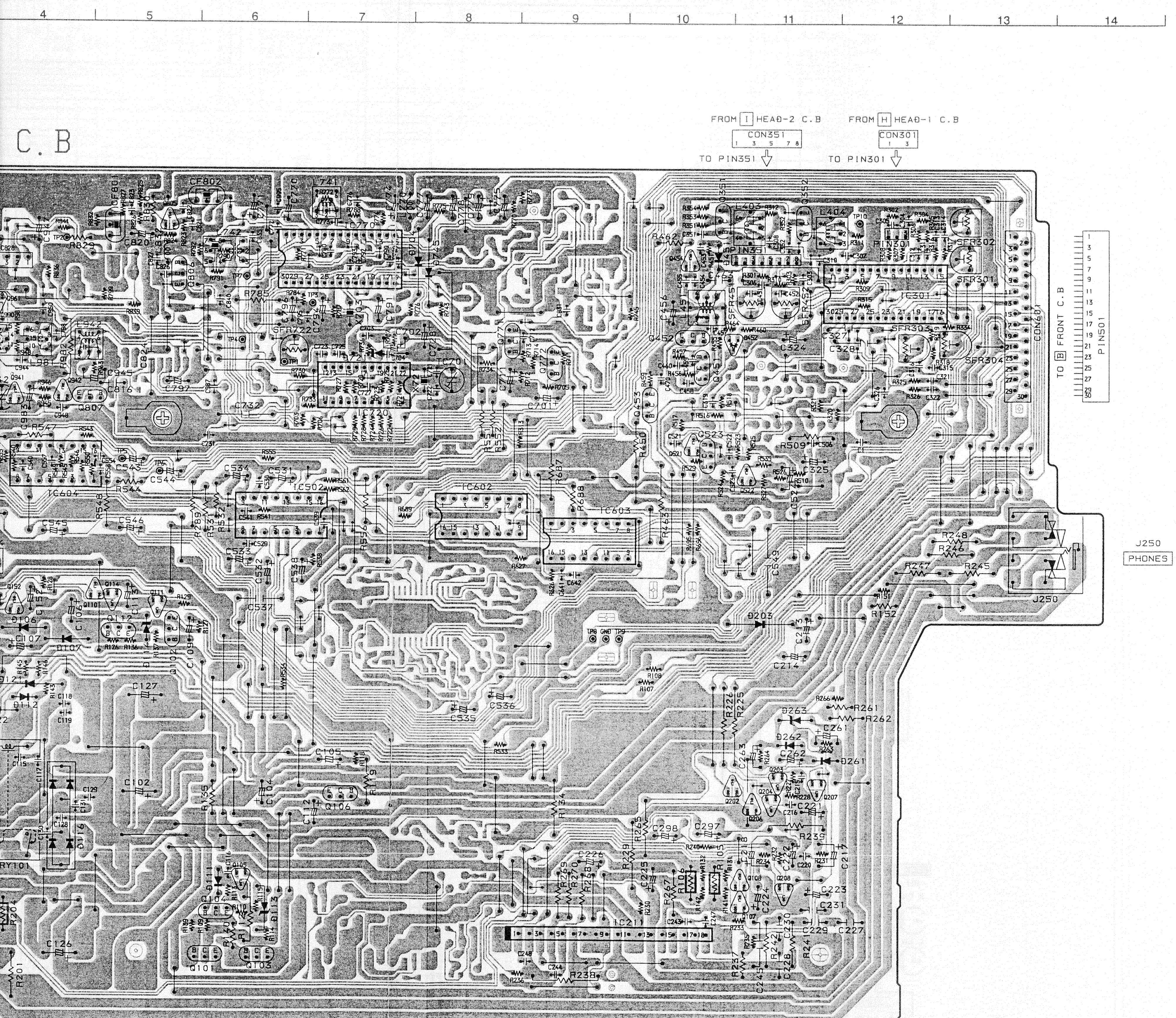
Z = HIGH IMPEDANCE
X = DON'T CARE

WIRING-3 (MAIN : K)

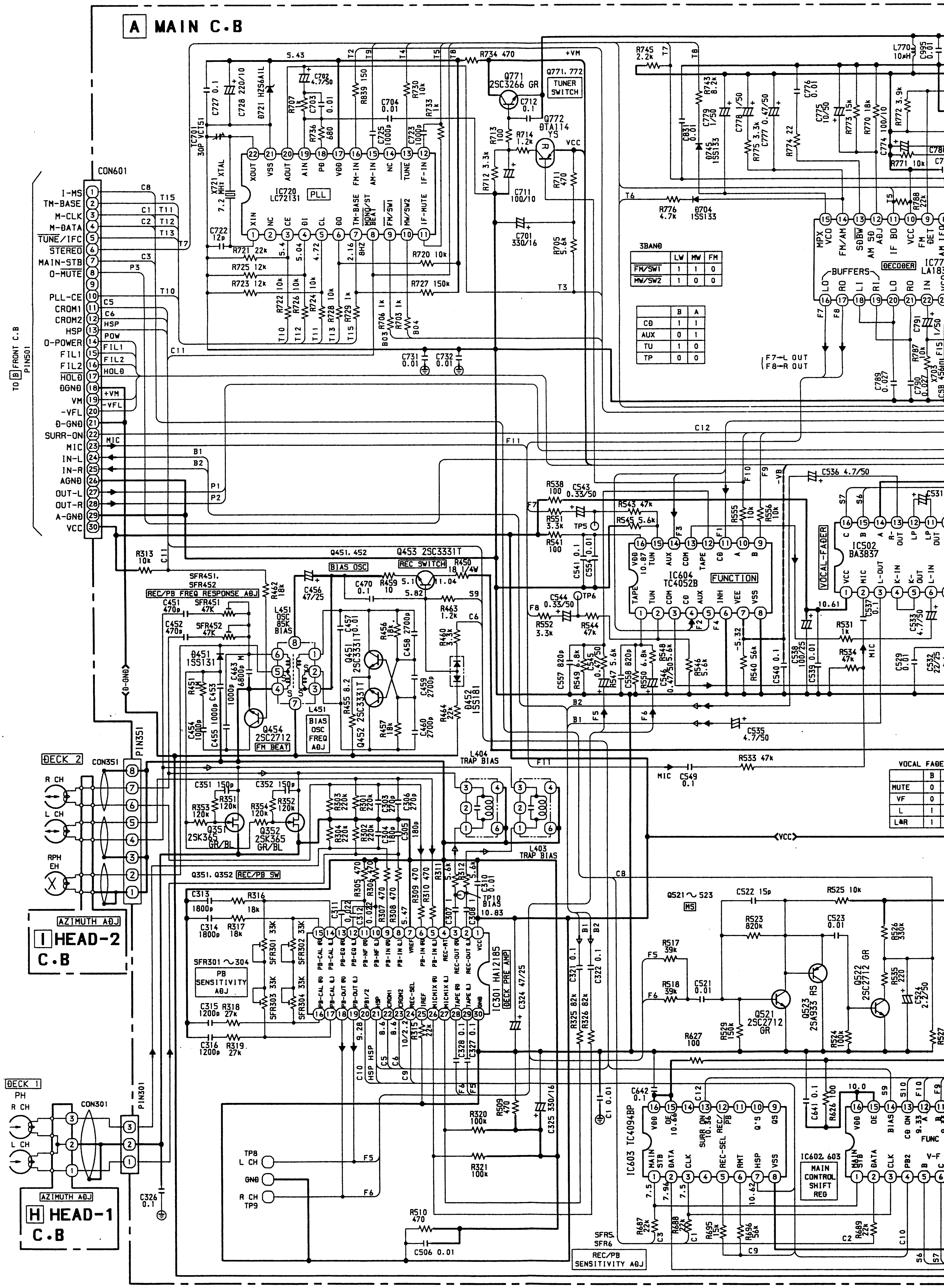

1
2
3
4
A
B
C
D
E
F
G
H
I
J
A MAIN C.
LW/MW LOOP
FM 75Ω
J652
VIDEO /AUX
R
L
FROM 3CD C.B CON5
TO CON604
W101
BLK
TO E AC C.B WH102
BLK
WHT
J253
SURROUND SPEAKERS
SPEAKER IMP:16Ω+16Ω
J253
SUPER WOOFER
R
L
J254
SPEAKERS
SPEAKER IMP:6Ω


DECODER ANTI BIRDIE
STEREO SW
STEREO DRIVE
TRIG
MUTE
FF
FF
FF
VCO
AM / FM SW
PILOT DET
PHASE DET
VCC
23
22
21
20
19
18
17
16
8
9
10
11
12
13
14
15

C.B

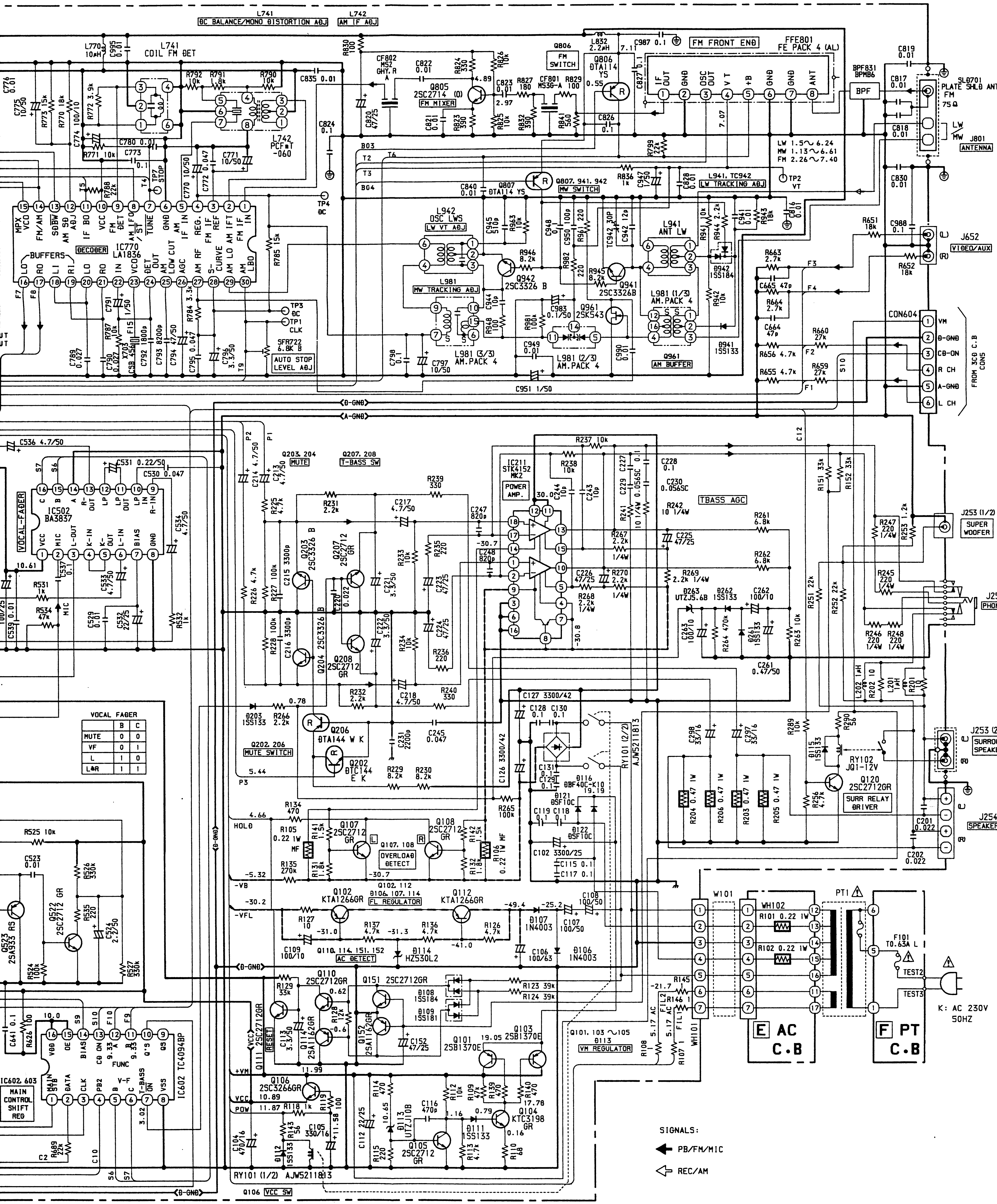

4
5
6
7
8
9
10
11
12
13
14
FROM I HEAD-2 C.B
CON351
TO PIN351
FROM H HEAD-1 C.B
CON301
TO PIN301
TO B FRONT C.B
PIN501
CON601
J250
PHONES
IC301
IC211
IC502
IC602
IC603
IC604

SCHEMATIC DIAGRAM-3 (MAIN : K)


A MAIN C.B
CON601
I-MS
TM-BASE
M-CLK
M-DATA
TUNE/IFC
STEREO
MAIN-STB
D-MUTE
PLL-CE
CDROM1
CDROM2
HSP
D-POWER
FIL1
FIL2
HOLD
DGND
VM
-VFL
D-GND
SURR-ON
MIC
IN-L
IN-R
AGND
OUT-L
OUT-R
A-GND
VCC
TO B FRONT C.B PIN501
IC720 LC72131 PLL
X721 7.2 MHz XTAL
Q771 2SC3266 GR
Q771, 772 TUNER SWITCH
Q772 DTA114 YS
D721 HZS6AIL
3BAND
IC77 LA18
BUFFERS
DECODER
F7→L OUT
F8→R OUT
IC604 TC4052B FUNCTION
IC502 BA3837
VOCAL-FADER
Q451, 452 BIAS OSC
Q453 2SC3331T REC SWITCH
SFR451, SFR452 REC/PB FREQ RESPONSE ADJ
L451 OSC 85K BIAS
L451 BIAS OSC FREQ ADJ
Q451 2SC3331T
Q452 2SC3331T
Q454 2SC2712 FM BEAT
D451 1SS131
D452 1SS181
L404 TRAP BIAS
L403 TRAP BIAS
DECK 2
CON351
PIN351
R CH
L CH
RPH
EH
Q351 2SK365 GR/BL
Q352 2SK365 GR/BL
Q351, Q352 REC/PB SW
SFR301∼304 PB SENSITIVITY ADJ
IC301 HA12185 DECK PRE AMP
TP10 BIAS
AZIMUTH ADJ
I HEAD-2 C.B
DECK 1
PH
CON301
PIN301
H HEAD-1 C.B
TP8 L CH
GND
R CH TP9
SFR5, SFR6 REC/PB SENSITIVITY ADJ
Q521∼523 MS
Q521 2SC2712 GR
Q522 2SC2712 GR
Q523 2SA933 RS
IC603 TC4094BP
IC602, 603 MAIN CONTROL SHIFT REG
VOCAL FADE
MUTE
VF
L
L&R
VCC

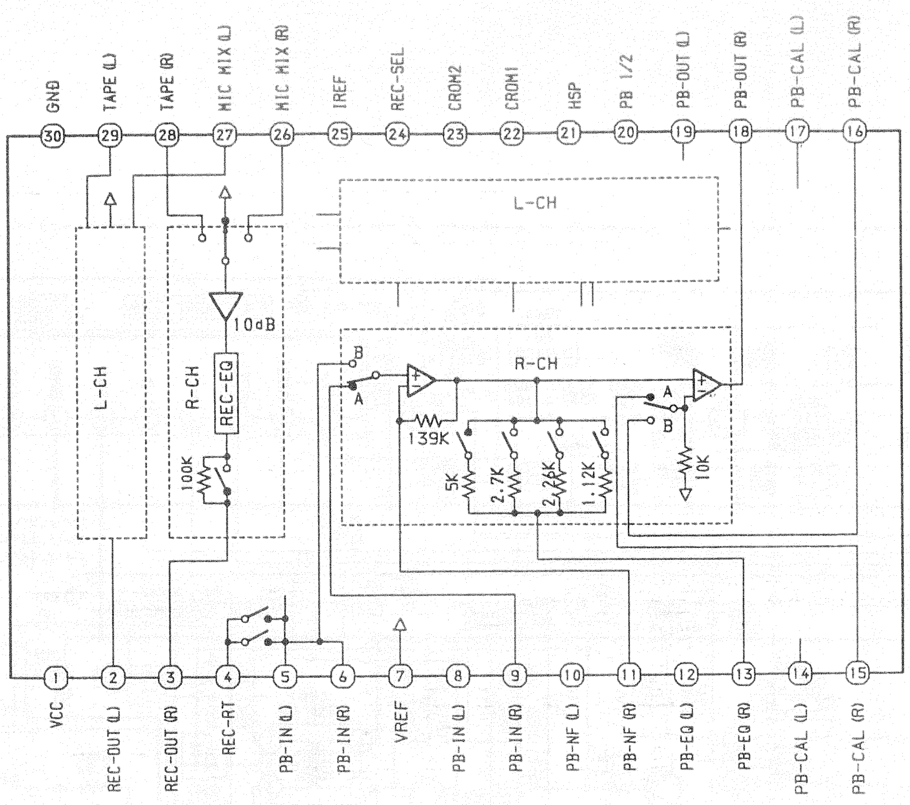
3BAND	LW	MW	FM
FM/SW1	1	1	0
MW/SW2	1	0	0

	B	A
CD	1	1
AUX	0	1
TU	1	0
TP	0	0

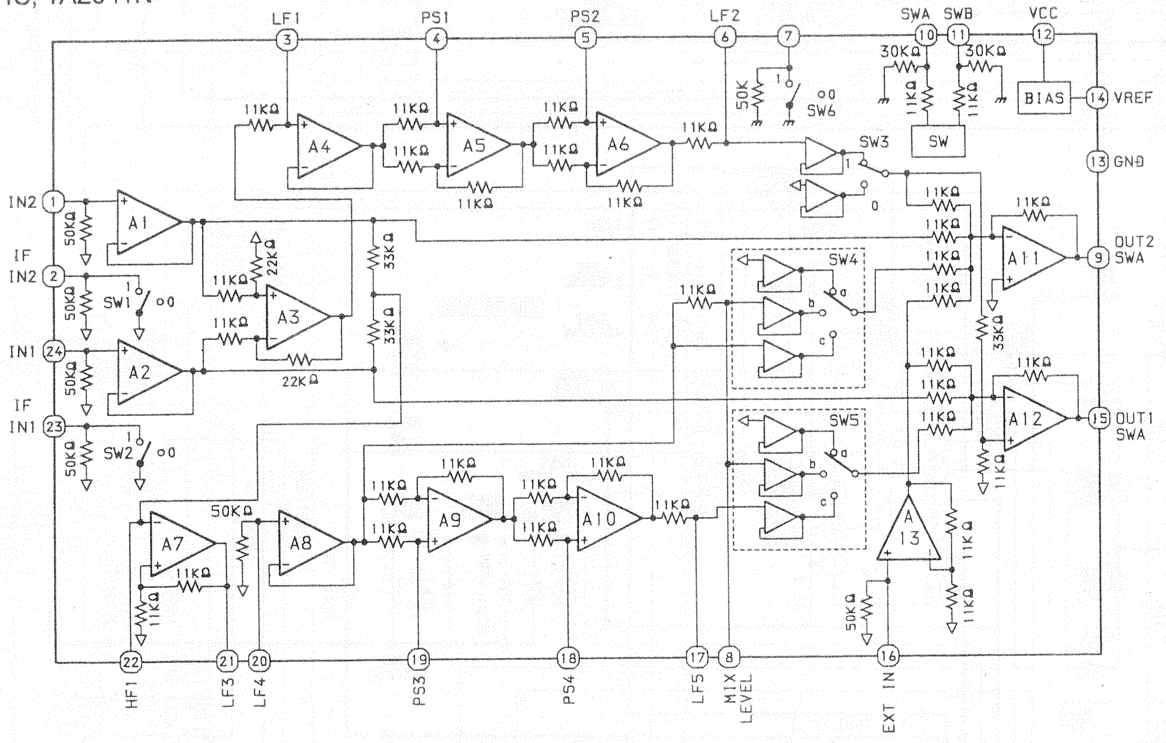

L741 ƋC BALANCE/MONO ƋISTORTION AƋJ
L742 AM IF AƋJ
L741 COIL FM ƋET
L742 PCF■T -060
FM FRONT ENƋ
FFE801 FE PACK 4 (AL)
Q805 2SC2714 (O) FM MIXER
Q806 FM SWITCH
Q806 ƋTA114 YS
CF802 MS2 GHY.R
CF801 MS3G-A
BPF831 BPMB6
SL0701 PLATE SHLƋ ANT FM 75Ω
J801 LW MW ANTENNA
LW 1.5~6.24
MW 1.13~6.61
FM 2.26~7.40
Q807 ƋTA114 YS
Q807, 941, 942 MW SWITCH
L941, TC942 LW TRACKING AƋJ
TP2 VT
TP4 ƋC
L942 OSC LWS LW VT AƋJ
L941 ANT LW
L981 MW TRACKING AƋJ
Q942 2SC3326 B
Q941 2SC3326B
L981 (1/3) AM.PACK 4
L981 (3/3) AM.PACK 4
L981 (2/3) AM.PACK 4
Q961 2SK543
Q961 AM BUFFER
Ƌ942 1SS184
Ƌ941 1SS133
IC770 LA1836
BUFFERS
ƋECOƋER
MPX VCO
FM/AM
SƋBW AM SƋ
IF BAƋ
VCC
FM ƋET
AM IFO ST
TUNE
GNƋ
AM IF IN
REG.
FM IF REF
AM IFT
FM IF IN
LO RO LI RI
VCO
ƋET OUT
AM LOW CUT
AGC
AM RF
S-CURVE
AM LO
AM LBO
TP3 ƋC
TP1 CLK
SFR722 6.8K B
AUTO STOP LEVEL AƋJ
TP7 STOP
J652 VIƋEO/AUX
CON604
VM
Ƌ-GNƋ
CƋ-ON
R CH
A-GNƋ
L CH
FROM 3CƋ C.B CON5
Ƌ-GNƋ
A-GNƋ
IC502 BA3837
VOCAL-FAƋER
Q203, 204 MUTE
Q207, 208 T-BASS SW
IC211 STK4152 MK2
POWER AMP.
TBASS AGC
J253 (1/2) SUPER WOOFER
J250 PHONES
Q203 2SC3326 B
Q204 2SC3326 B
Q207 2SC2712 GR
Q208 2SC2712 GR
Ƌ203 1SS133
Q206 ƋTA144 W K
Q202 ƋTC144 E K
Q202, 206 MUTE SWITCH
VOCAL FAƋER
	B	C
MUTE	0	0
VF	0	1
L	1	0
L&R	1	1
RY101 (2/2) AJW5211813
Ƌ116 ƋBF40C-K10
Ƌ121 ƋSF10C
Ƌ122 ƋSF10C
Ƌ113
RY102 JQ1-12V
Q120 2SC2712GR
SURR RELAY ƋRIVER
Ƌ115 1SS133
J253 (2/2) SURROUNƋ SPEAKERS
J254 SPEAKERS
Ƌ263 UTZJ5.6B
Ƌ262 1SS133
Ƌ261 1SS133
HOLƋ
Q107 2SC2712 GR
Q108 2SC2712 GR
Q107, 108 OVERLOAƋ ƋETECT
Q102 KTA1266GR
Q112 KTA1266GR
Q102, 112 Ƌ106, 107, 114 FL REGULATOR
Ƌ107 1N4003
Ƌ106 1N4003
Ƌ114 HZS30L2
Q110, 114, 151, 152 AC ƋETECT
Q110 2SC2712GR
Q114 2SA1162GR
Q151 2SC2712GR
Q152 2SA1162GR
Ƌ108 1SS184
Ƌ109 1SS181
Q111 2SC2712GR
RESET
Q101 2SB1370E
Q103 2SB1370E
Q101, 103 ~105 VM REGULATOR
Q106 2SC3266GR
Q104 KTC3198 GR
Q105 2SC2712 GR
Ƌ113 UTZJ10B
Ƌ111 1SS133
Ƌ112 1SS133
RY101 (1/2) AJW5211813
Q106 VCC SW
W101
WH102
WH101
PT1
F101 T0.63A L
TEST2
TEST3
K: AC 230V 50HZ
E AC C.B
F PT C.B
Q522 2SC2712 GR
Q523 2SA933 RS
IC602 TC4094BP
IC602, 603 MAIN CONTROL SHIFT REG
MAIN STB
ƋATA
CLK
FUNC
V-F
T-BASS ON
SIGNALS:
PB/FM/MIC
REC/AM

IC BLOCK DIAGRAM-3

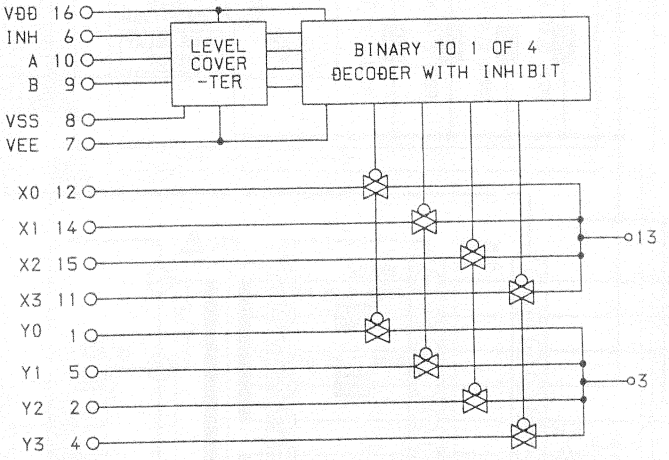
IC, HA12185NT


GND
TAPE (L)
TAPE (R)
MIC MIX (L)
MIC MIX (R)
IREF
REC-SEL
CROM2
CROM1
HSP
PB 1/2
PB-OUT (L)
PB-OUT (R)
PB-CAL (L)
PB-CAL (R)
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
L-CH
R-CH
REC-EQ
10dB
100K
L-CH
R-CH
B
A
139K
5K
2.7K
2.26K
1.12K
10K
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
VCC
REC-OUT (L)
REC-OUT (R)
REC-RT
PB-IN (L)
PB-IN (R)
VREF
PB-IN (L)
PB-IN (R)
PB-NF (L)
PB-NF (R)
PB-EQ (L)
PB-EQ (R)
PB-CAL (L)
PB-CAL (R)

IC, TA2041N


LF1
PS1
PS2
LF2
SWA
SWB
VCC
3
4
5
6
7
10
11
12
30KΩ
30KΩ
BIAS
14 VREF
13 GND
SW
SW6
SW3
50K
11KΩ
A4
A5
A6
A1
A2
A3
A7
A8
A9
A10
A11
A12
A13
IN2 1
IF IN2 2
IN1 24
IF IN1 23
50KΩ
SW1
SW2
22KΩ
33KΩ
SW4
SW5
a
b
c
9 OUT2 SWA
15 OUT1 SWA
50KΩ
50KΩ
22
21
20
19
18
17
8
16
HF1
LF3
LF4
PS3
PS4
LF5
MIX LEVEL
EXT IN

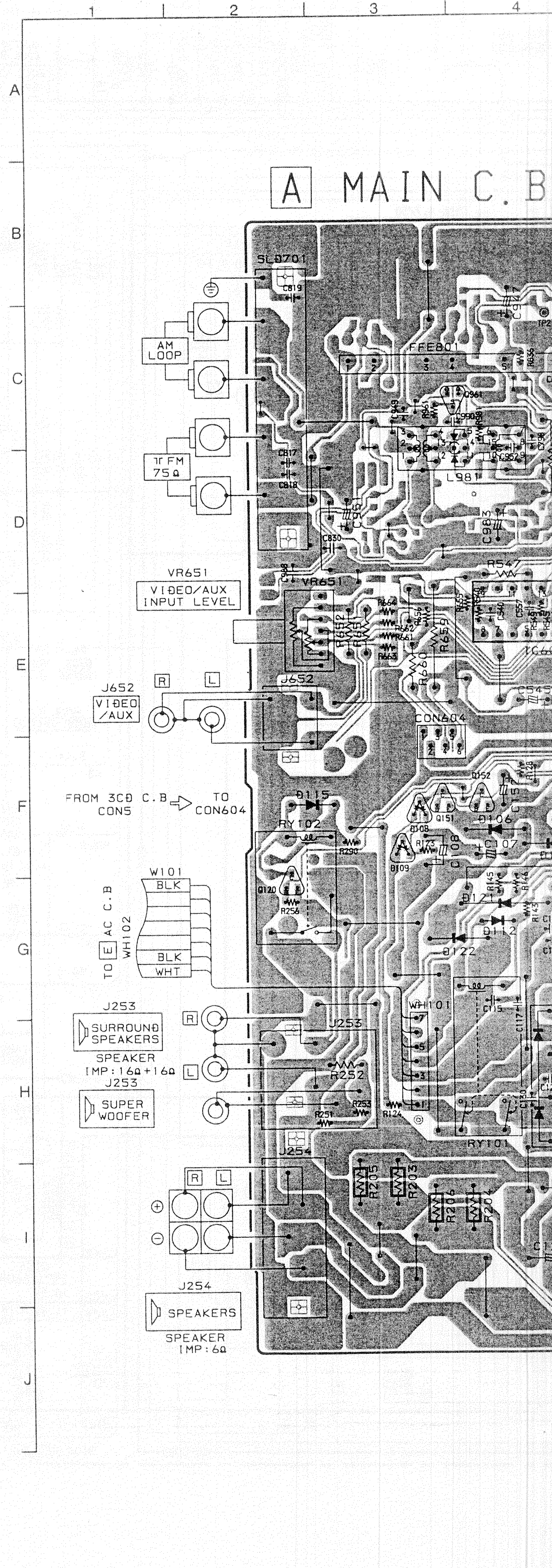
IC, BU4052BCF
IC, BU4052BC


VDD 16
INH 6
A 10
B 9
VSS 8
VEE 7
LEVEL COVER -TER
BINARY TO 1 OF 4 DECODER WITH INHIBIT
X0 12
X1 14
X2 15
X3 11
Y0 1
Y1 5
Y2 2
Y3 4
13
3

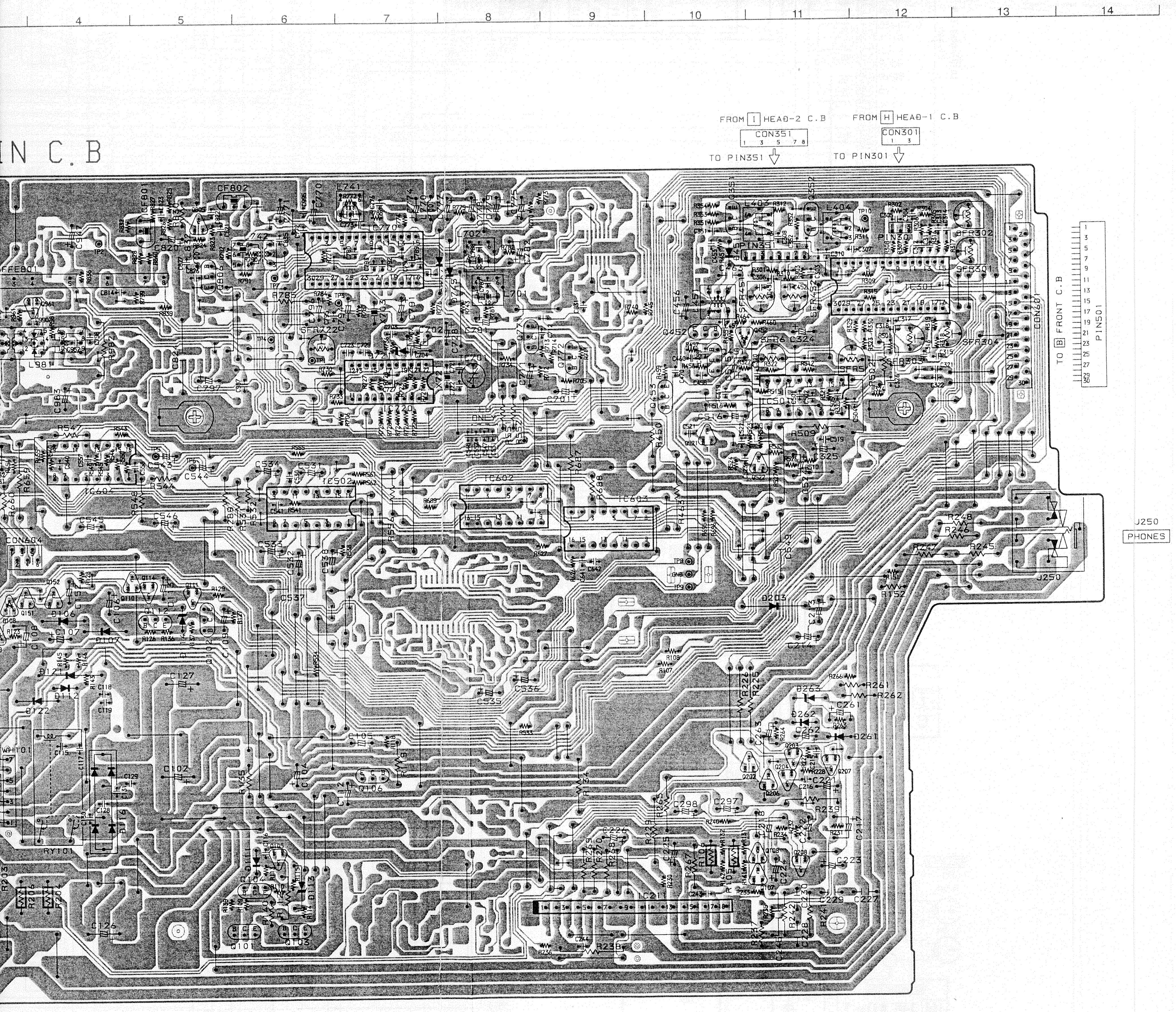
TRUTH TABLE

INHIBIT	A	B	ON SWITCH
L	L	L	X0 Y0
L	H	L	X1 Y1
L	L	H	X2 Y2
L	H	H	X3 Y3
H	X	X	NONE

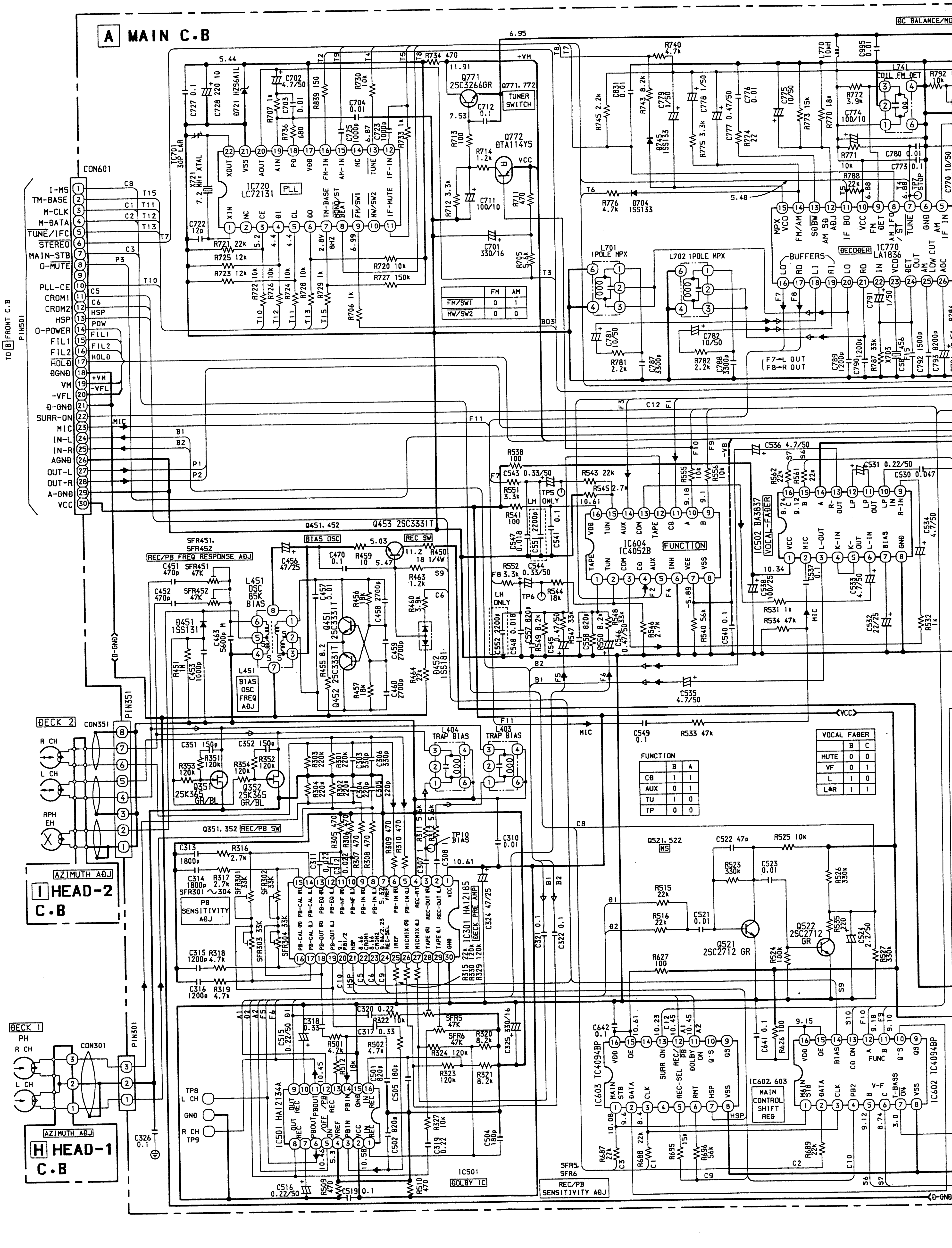
WIRING-4 (MAIN : LH,G)


1
2
3
4
A
B
C
D
E
F
G
H
I
J
A MAIN C.B
SL0701
AM LOOP
FM 75Ω
VR651
VIDEO/AUX INPUT LEVEL
J652
VIDEO /AUX
R
L
J652
CON604
FROM 3CD C.B CONS
TO CON604
RY102
W101
BLK
BLK
WHT
TO E AC C.B WH102
WH101
J253
SURROUND SPEAKERS
SPEAKER IMP: 16Ω+16Ω
J253
SUPER WOOFER
RY101
J254
R
L
⊕
⊖
J254
SPEAKERS
SPEAKER IMP: 6Ω

IN C.B


4
5
6
7
8
9
10
11
12
13
14
FROM I HEAD-2 C.B
CON351
TO PIN351
FROM H HEAD-1 C.B
CON301
TO PIN301
TO B FRONT C.B
PIN501
CON601
J250
PHONES

SCHEMATIC DIAGRAM-4 (MAIN : LH,G)


A MAIN C.B
CON601
I-MS
TM-BASE
M-CLK
M-DATA
TUNE/IFC
STEREO
MAIN-STB
D-MUTE
PLL-CE
CROM1
CROM2
HSP
D-POWER
FIL1
FIL2
HOLD
DGND
VM
-VFL
D-GND
SURR-ON
MIC
IN-L
IN-R
AGND
OUT-L
OUT-R
A-GND
VCC
TO B FRONT C.B PIN501
IC720 LC72131 PLL
X721 7.2 MHz XTAL
IC701 30P LAR
Q771 2SC3266GR
Q771, 772 TUNER SWITCH
Q772 BTA114YS
FM/SW1
MW/SW2
FM
AM
L701 1POLE MPX
L702 1POLE MPX
IC770 LA1836
DECODER
BUFFERS
F7→L OUT
F8→R OUT
DC BALANCE/MO
L741 COIL FM DET
IC604 TC4052B FUNCTION
IC502 BA3837 VOCAL-FADER
Q451, 452
Q453 2SC3331T
BIAS OSC
REC SW
SFR451, SFR452
REC/PB FREQ RESPONSE ADJ
L451 OSC 85K BIAS
L451 BIAS OSC FREQ ADJ
Q451 2SC3331T
Q452 2SC3331T
D451 1SS131
D452 1SS181
DECK 2
CON351
PIN351
R CH
L CH
RPH
EH
Q351 2SK365 GR/BL
Q352 2SK365 GR/BL
Q351, 352 REC/PB SW
L404 TRAP BIAS
L403 TRAP BIAS
TP10 BIAS
AZIMUTH ADJ
I HEAD-2 C.B
SFR301~304 PB SENSITIVITY ADJ
IC301 HA12185 DECK PRE AMP
FUNCTION
VOCAL FADER
Q521, 522 MS
Q521 2SC2712 GR
Q522 2SC2712 GR
DECK 1
PH
CON301
PIN301
H HEAD-1 C.B
TP8 L CH
GND
R CH TP9
IC501 HA12134A
IC501 DOLBY IC
SFR5, SFR6 REC/PB SENSITIVITY ADJ
IC603 TC4094BP
IC602, 603 MAIN CONTROL SHIFT REG
IC602 TC4094BP
MIC
VCC
D-GND

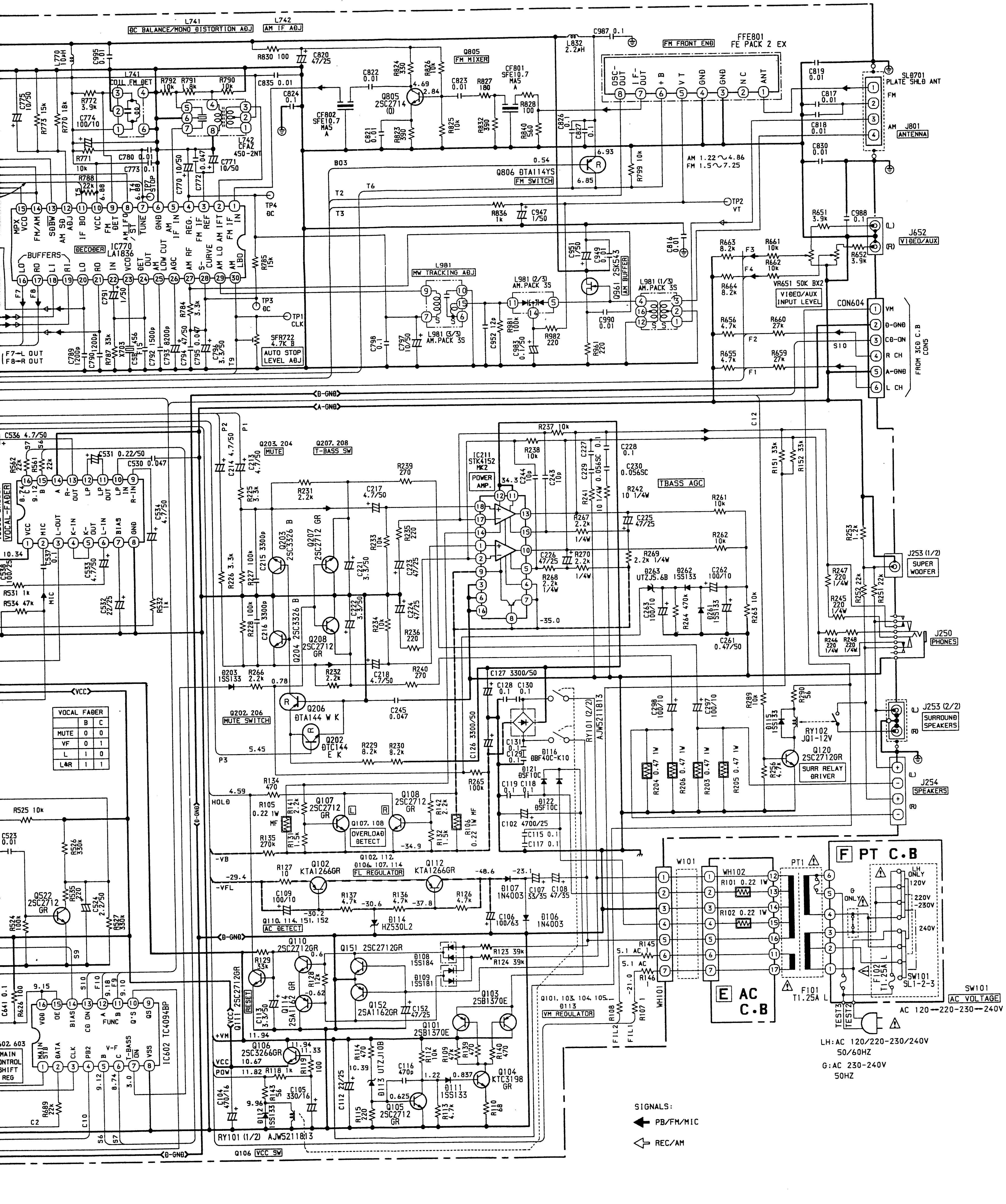
	FM	AM
FM/SW1	0	1
MW/SW2	0	0

FUNCTION

	B	A
CD	1	1
AUX	0	1
TU	1	0
TP	0	0

VOCAL FADER

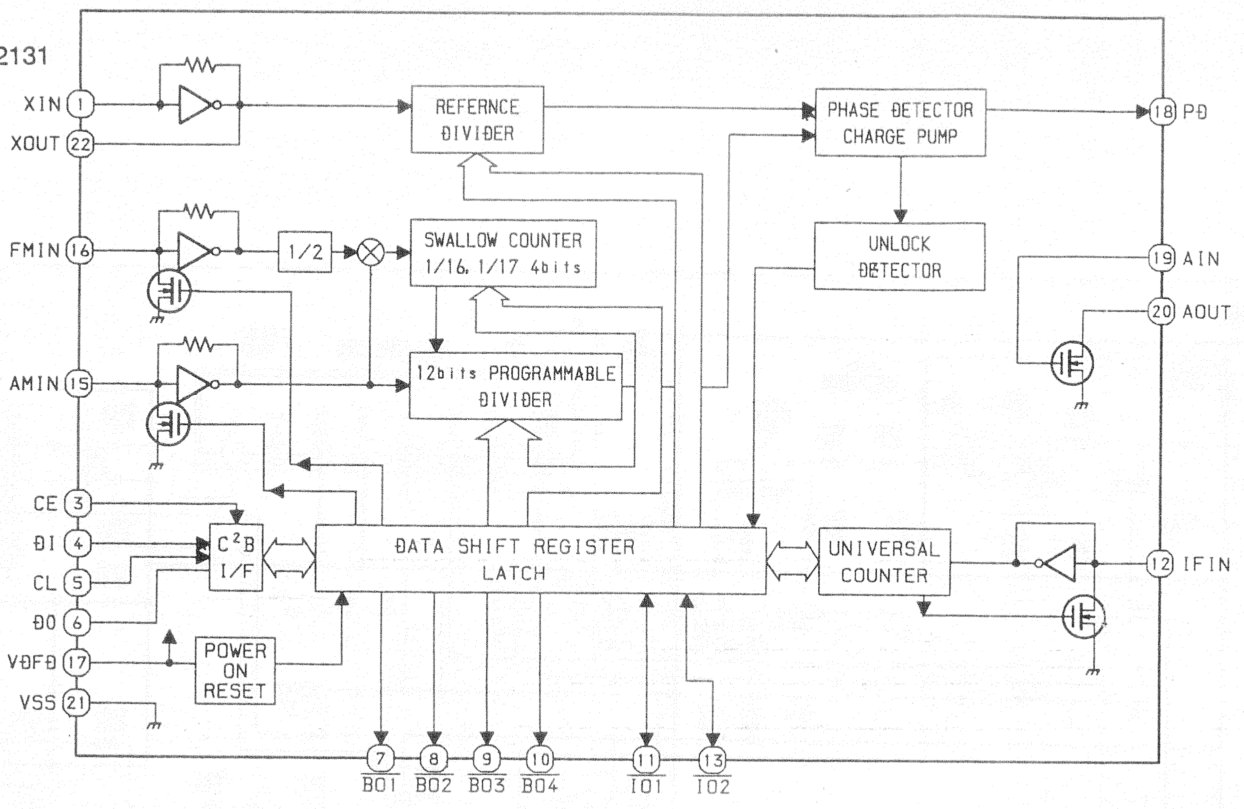
	B	C
MUTE	0	0
VF	0	1
L	1	0
L&R	1	1



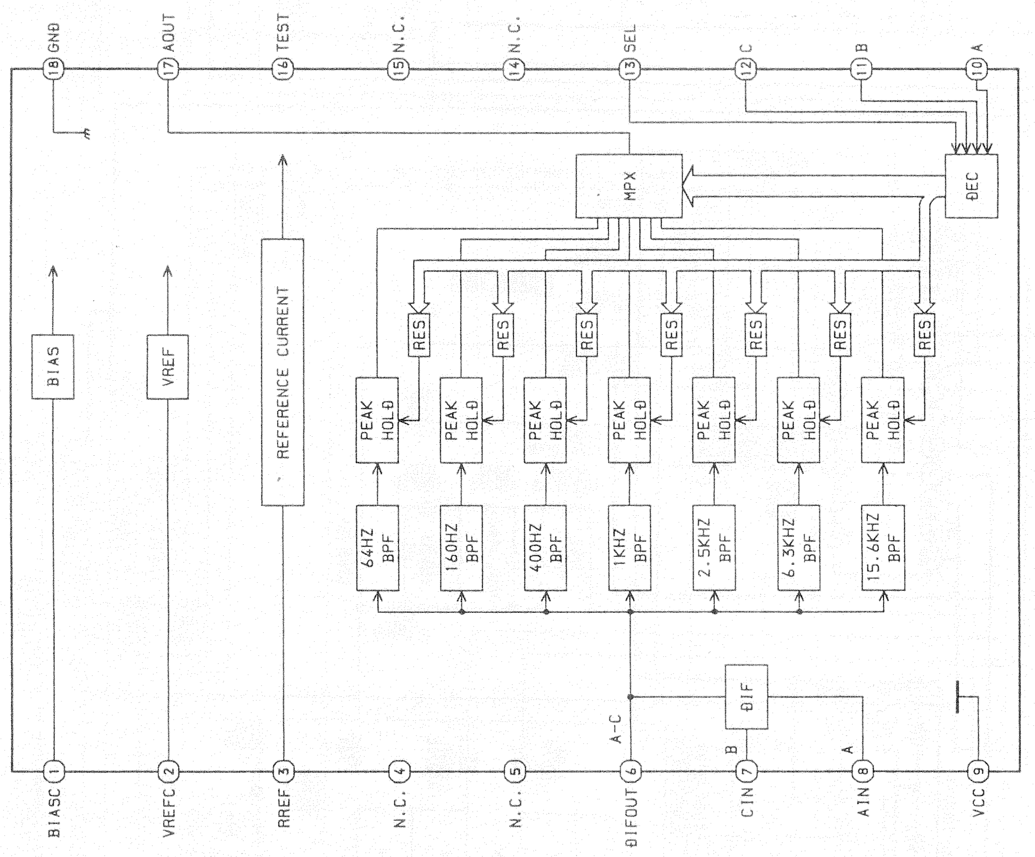
L741
DC BALANCE/MONO DISTORTION ADJ
L742
AM IF ADJ
FFE801
FE PACK 2 EX
FM FRONT END
OSC-OUT
IF-OUT
+B
VT
GND
GND
NC
ANT
Q805
FM MIXER
2SC2714
CF801
SFE10.7
CF802
SFE10.7
SL0701
PLATE SHLD ANT
FM
AM
J801
ANTENNA
Q806 DTA114YS
FM SWITCH
AM 1.22～4.86
FM 1.5～7.25
TP2
VT
TP4
DC
IC770
LA1836
DECODER
BUFFERS
TP3
DC
TP1
CLK
SFR722
4.7K B
AUTO STOP
LEVEL ADJ
F7—L OUT
F8—R OUT
L981
MW TRACKING ADJ
L981 (2/3)
AM.PACK 3S
L981 (1/3)
AM.PACK 3S
L981 (3/3)
AM.PACK 3S
Q961 2SK543
AM BUFFER
J652
VIDEO/AUX
VR651 50K BX2
VIDEO/AUX
INPUT LEVEL
CON604
VM
D-GND
CD-ON
R CH
A-GND
L CH
FROM 3CD C.B
CON5
D-GND
A-GND
VOCAL-FADER
Q203, 204
MUTE
Q207, 208
T-BASS SW
IC211
STK4152
MK2
POWER
AMP.
TBASS AGC
J253 (1/2)
SUPER
WOOFER
J250
PHONES
Q202, 206
MUTE SWITCH
Q206
DTA144 W K
Q202
DTC144
E K
VOCAL FADER
B
C
MUTE
0
0
VF
0
1
L
1
0
L&R
1
1
RY101 (2/2)
AJW5211813
RY102
JQ1-12V
Q120
2SC2712GR
SURR RELAY
DRIVER
J253 (2/2)
SURROUND
SPEAKERS
J254
SPEAKERS
Q107, 108
OVERLOAD
DETECT
Q102, 112,
D106, 107, 114
FL REGULATOR
Q110, 114, 151, 152
AC DETECT
D114
HZ530L2
W101
WH102
PT1
F PT C.B
LH ONLY
120V
220V
230V
240V
G ONLY
E AC C.B
F101
T1.25A L
F102
T1.25A L
SW101
SL1-2-3
SW101
AC VOLTAGE
AC 120—220-230—240V
LH:AC 120/220-230/240V
50/60HZ
G:AC 230-240V
50HZ
Q101, 103, 104, 105, D113
VM REGULATOR
RESET
IC602 TC4094BP
MAIN
CONTROL
SHIFT
REG
RY101 (1/2) AJW5211813
Q106
VCC SW
SIGNALS:
PB/FM/MIC
REC/AM

IC BLOCK DIAGRAM-4

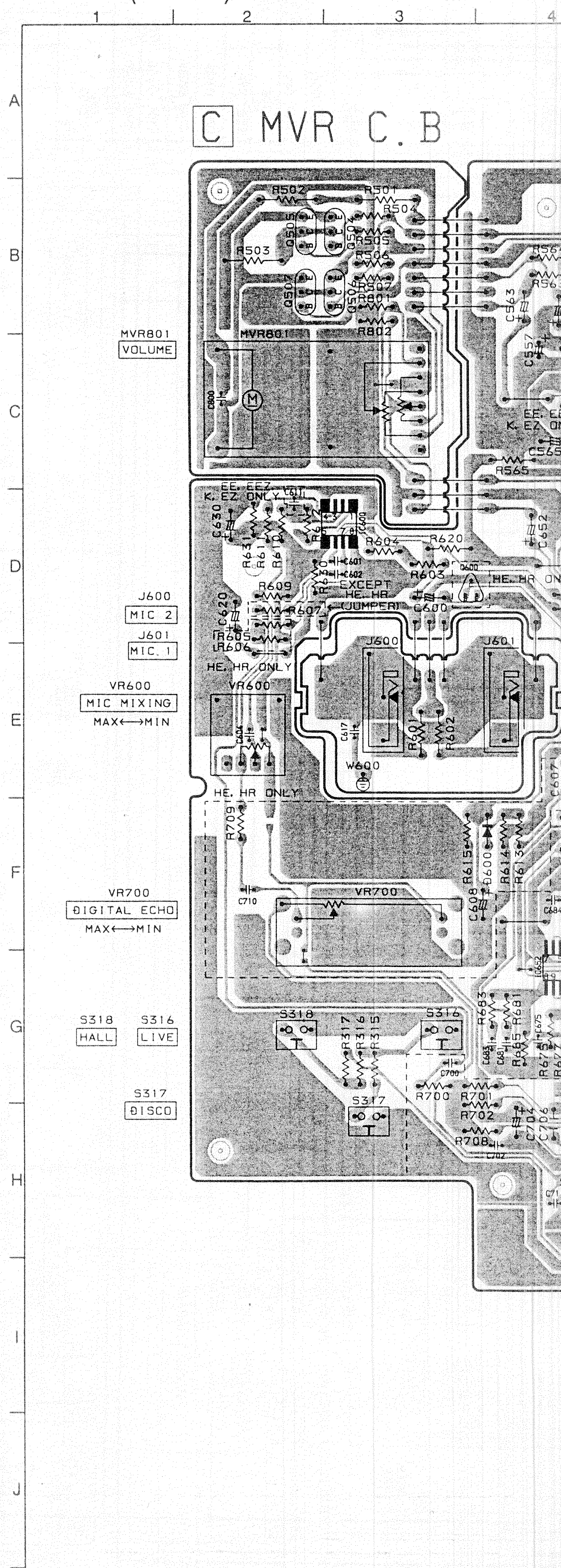
IC, LC72131


XIN 1
XOUT 22
FMIN 16
AMIN 15
CE 3
DI 4
CL 5
DO 6
VDFD 17
VSS 21
REFERNCE DIVIDER
PHASE DETECTOR CHARGE PUMP
18 PD
1/2
SWALLOW COUNTER 1/16, 1/17 4bits
UNLOCK DETECTOR
19 AIN
20 AOUT
12bits PROGRAMMABLE DIVIDER
C²B I/F
DATA SHIFT REGISTER LATCH
UNIVERSAL COUNTER
12 IFIN
POWER ON RESET
7 BO1
8 BO2
9 BO3
10 BO4
11 IO1
13 IO2

IC, BA3834S

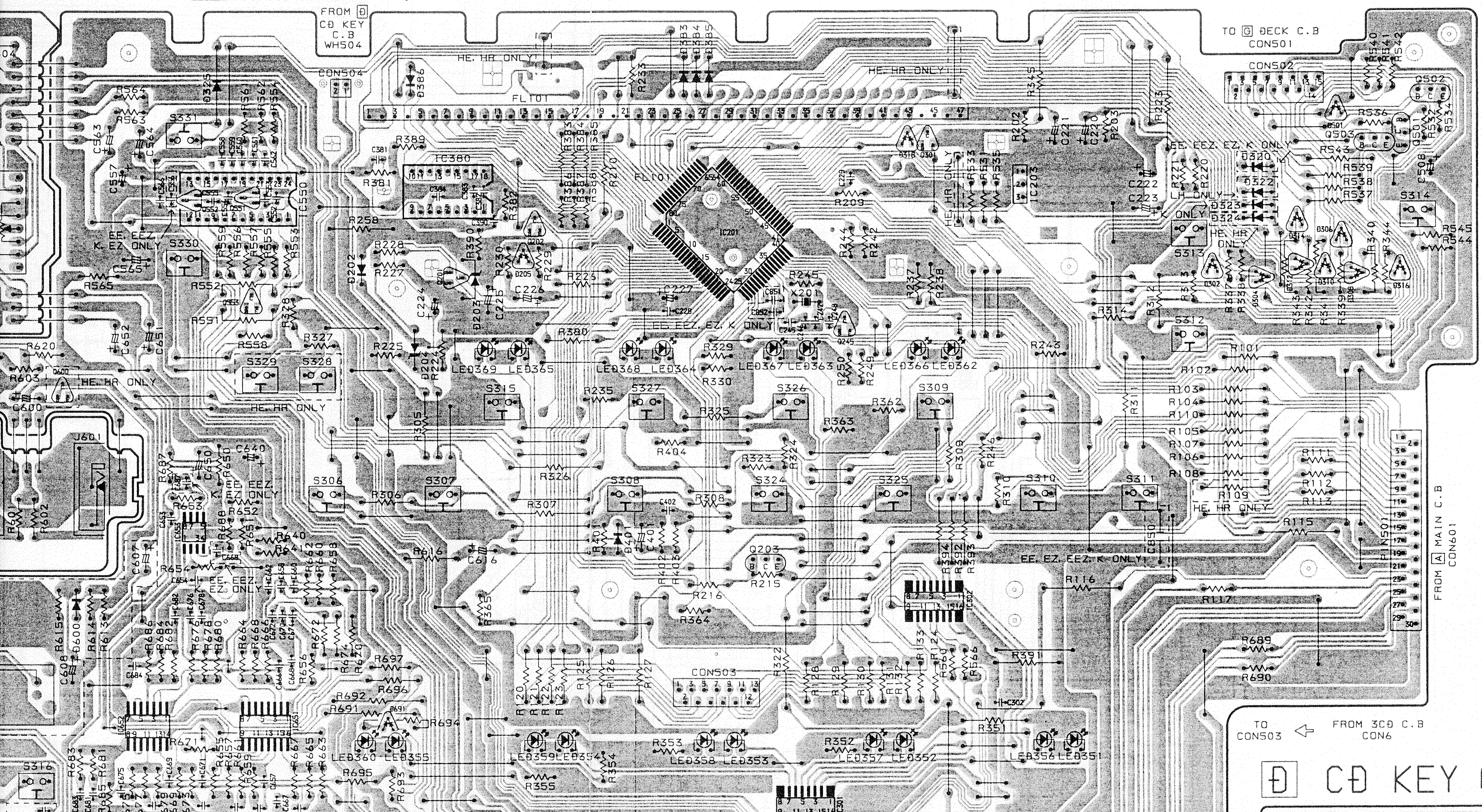

18 GND
17 AOUT
16 TEST
15 N.C.
14 N.C.
13 SEL
12 C
11 B
10 A
MPX
DEC
BIAS
VREF
REFERENCE CURRENT
RES
PEAK HOLD
64HZ BPF
160HZ BPF
400HZ BPF
1KHZ BPF
2.5KHZ BPF
6.3KHZ BPF
15.6KHZ BPF
DIF
A-C
B
A
1 BIASC
2 VREFC
3 RREF
4 N.C.
5 N.C.
6 DIFOUT
7 CIN
8 AIN
9 VCC

WIRING-5 (FRONT)


1
2
3
4
A
B
C
D
E
F
G
H
I
J
C MVR C.B
R502
R501
R504
R503
R505
MVR801
R802
MVR801 VOLUME
R565
EE, EEZ EZ ONLY
EXCEPT HE, HR (JUMPER)
HE, HR ONLY
J600 MIC 2
J601 MIC. 1
J600
J601
VR600 MIC MIXING MAX←→MIN
VR600
W600
R709
VR700
C710
VR700 DIGITAL ECHO MAX←→MIN
S318 HALL
S316 LIVE
S317 DISCO
S318
S316
S317
R700
R701
R702
R708

3 4 5 6 7 8 9 10 11 12 13 14

B FRONT C.B


FROM D CD KEY C.B WH504
CON504
HE. HR ONLY
FL101
IC201
IC380
IC550
IC700
CON503
CON501
CON502
TO G DECK C.B CON501
FROM A MAIN C.B CON601
EE. EZ. EZ. K ONLY
EE. EZ K. EZ ONLY
J601
TO CON503
FROM 3CD C.B CON6

S331
T-BASS

S319, LED360, LED355
BGM

S320, LED359, LED354
CLASSIC

S321, LED358, LED353
JAZZ

S322, LED357, LED352
POP

S311
SYNC DUB NORM/HIGH

S323, LED356, LED351
ROCK

S313
DOLBY NR

S314
POWER

S330
KARAOKE

S307
▶▶

S306
◀◀

S308
◀▶
DIRECTION/PRESET

S326, LED367, LED363
TUNER/BAND

S309, LED366, LED362
TAPE (DECK 1/2)

S310
REC/ REC MUTE

S312
REV MODE

S329
b

S328
#

KEY CONTROL

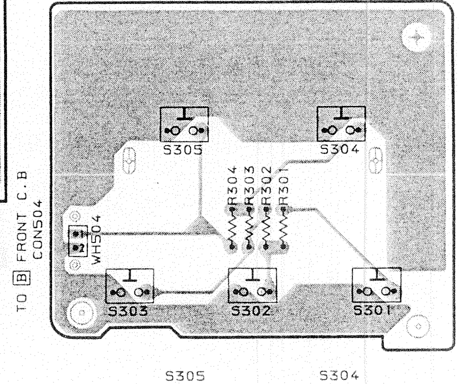
S315, LED369, LED365
CD

S327, LED368, LED364
VIDEO/PHONO/AUX

S324
■
CLEAR

S325
▮▮
SET

D CD KEY C.B


S305
S304
S303
S302
S301
R304
R303
R302
R301
WH504
TO B FRONT C.B CON504

S305
OPEN/ ▲ CLOSE

S304
DISC CHANGE

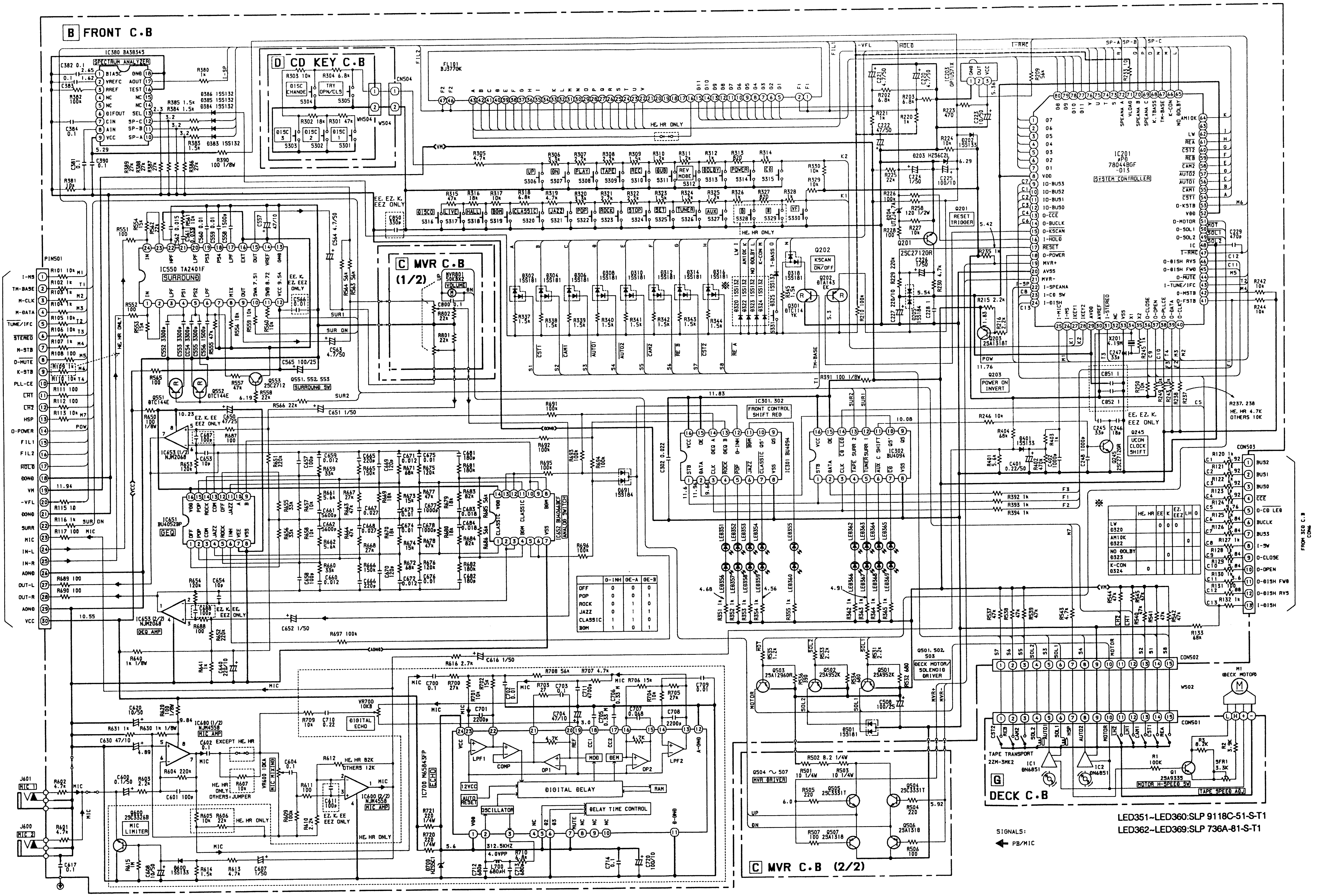
S303
DISC 3

S302
DISC 2

S301
DISC 1

DISC DIRECT PLAY

SCHEMATIC DIAGRAM-5 (FRONT)


B FRONT C.B
D CD KEY C.B
C MVR C.B (1/2)
C MVR C.B (2/2)
G DECK C.B
IC380 BA3834S
SPECTRUM ANALYZER
IC550 TA2401F
SURROUND
IC651 BU4052BP
GEQ
IC652 BU4066BF
ANALOG SWITCH
IC653 (1/2) NJM2068
IC653 (2/2) NJM2068
GEQ AMP
IC680 (1/2) NJM4558
MIC AMP
IC680 (2/2) NJM4558
MIC AMP
IC700 M65843FP
ECHO
DIGITAL ECHO
DIGITAL DELAY
DELAY TIME CONTROL
OSCILLATOR
AUTO RESET
RAM
LPF1
LPF2
COMP
OP1
OP2
MOD
DEM
Q600 2SC3326B
MIC LIMITER
IC201 78044BGF -013
SYSTEM CONTROLLER
IC301, 302 FRONT CONTROL SHIFT REG
IC301 BU4094
IC302 BU4094
FL101 BJ3770K
IC203 GP1U571X
Q201 RESET TRIGGER
Q203 POWER ON INVERT
Q245 UCON CLOCK SHIFT
Q202 KSCAN ON/OFF
Q501, 502, 503 DECK MOTOR/SOLENOID DRIVER
Q504 ~ 507 MVR DRIVER
MOTOR H-SPEED SW
TAPE SPEED ADJ
TAPE TRANSPORT 2ZM-3MK2
M1 DECK MOTOR
PIN501
FROM A MAIN C.B CON601
FROM 3C0 C.B CON4
CON501
CON502
CON503
CON504
MVR801 50KBX2 VOLUME
J601 MIC 1
J600 MIC 2
SIGNALS:
PB/MIC

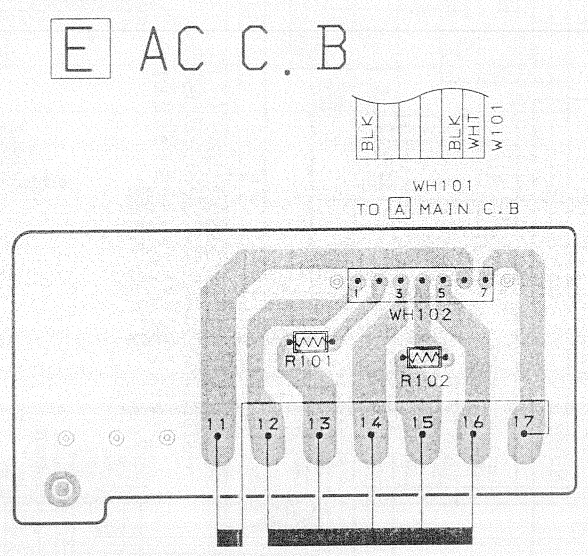
	G-INH	GE-A	GE-B
OFF	0	0	0
POP	0	0	1
ROCK	0	1	0
JAZZ	0	1	1
CLASSIC	1	1	0
BGM	1	0	1

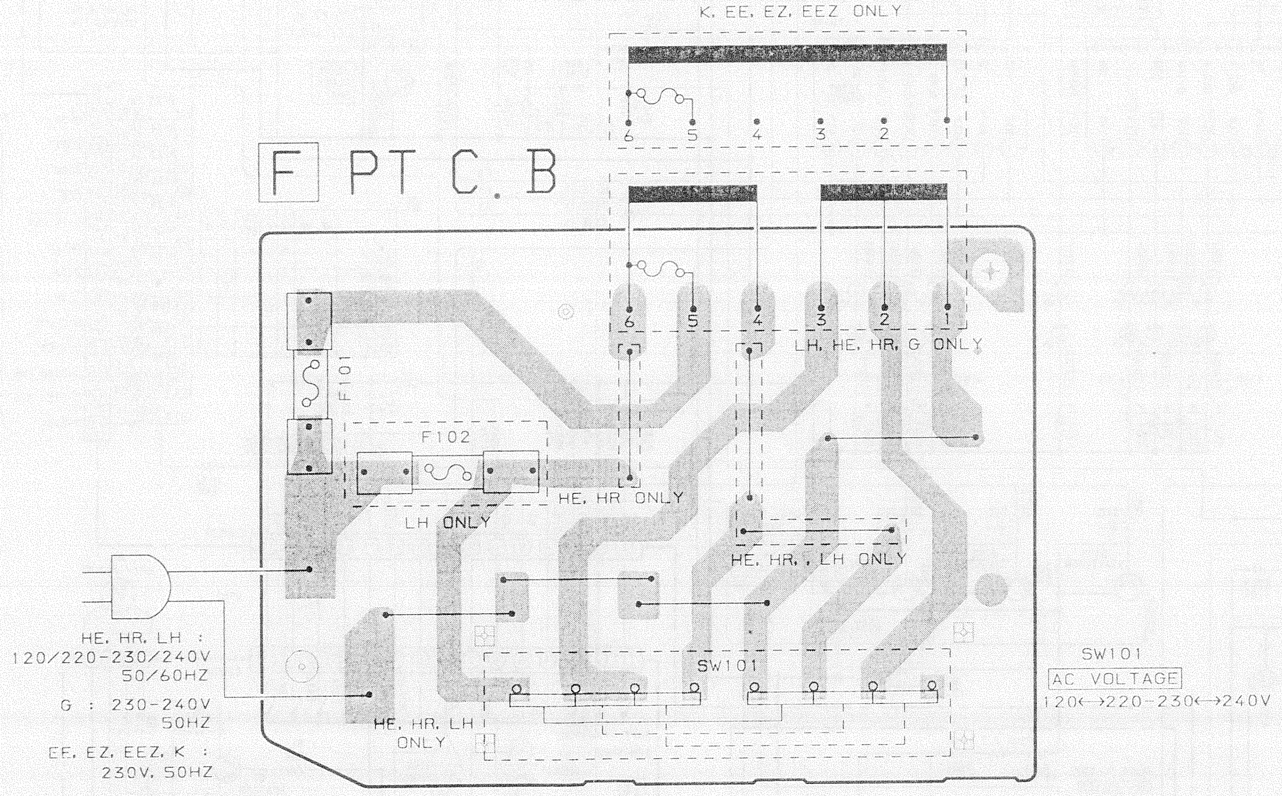
※

	HE, HR	EE	K	EZ, EEZ	LH	G
LW D320		0	0	0		
AM10K D322					0	
NO DOLBY D323			0			
K-CON D324	0					

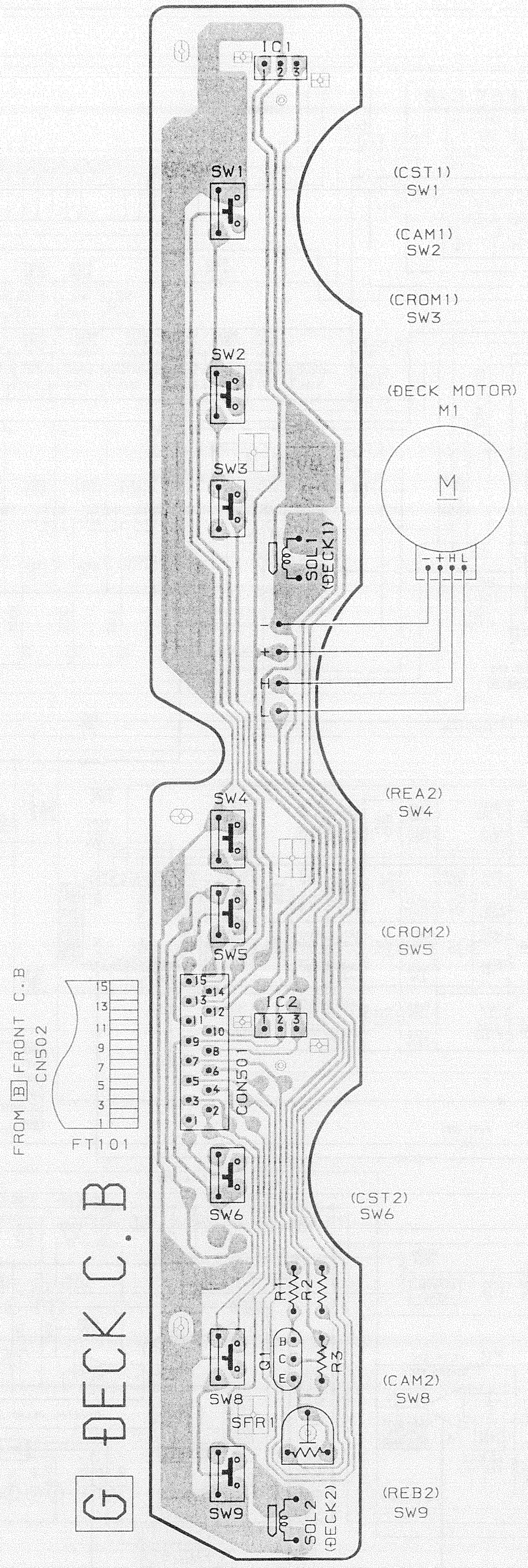
LED351~LED360:SLP 9118C-51-S-T1
LED362~LED369:SLP 736A-81-S-T1

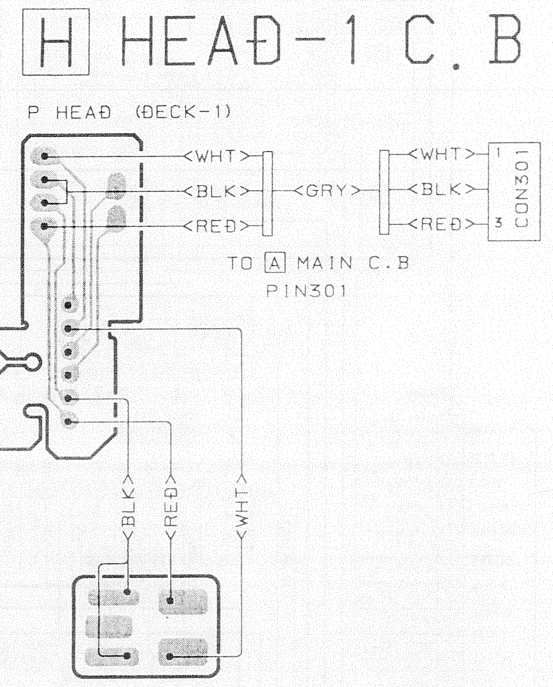
WIRING-6 (PT)

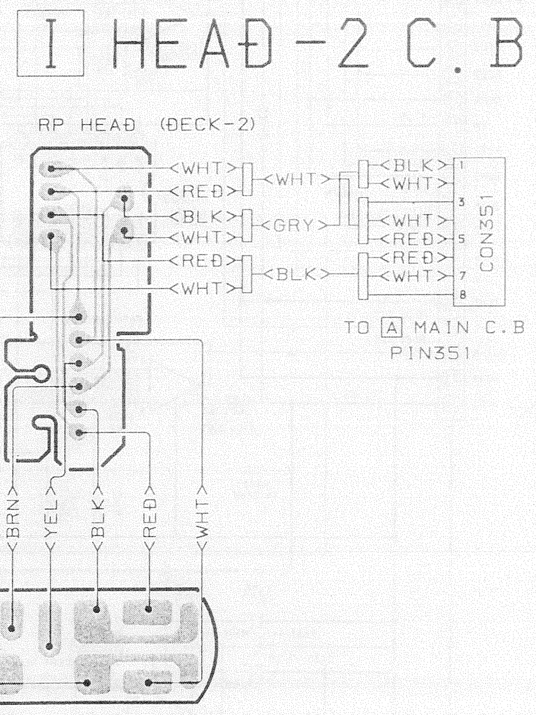

E AC C.B
BLK
BLK
WHT
W101
WH101
TO A MAIN C.B
1 3 5 7
WH102
R101
R102
11 12 13 14 15 16 17


F PT C.B
K, EE, EZ, EEZ ONLY
6 5 4 3 2 1
6 5 4 3 2 1
LH, HE, HR, G ONLY
F101
F102
LH ONLY
HE, HR ONLY
HE, HR, , LH ONLY
SW101
HE, HR, LH ONLY
HE, HR, LH :
120/220-230/240V
50/60HZ
G : 230-240V
50HZ
EF, EZ, EEZ, K :
230V, 50HZ
SW101
AC VOLTAGE
120←→220-230←→240V

WIRING-7 (DECK)

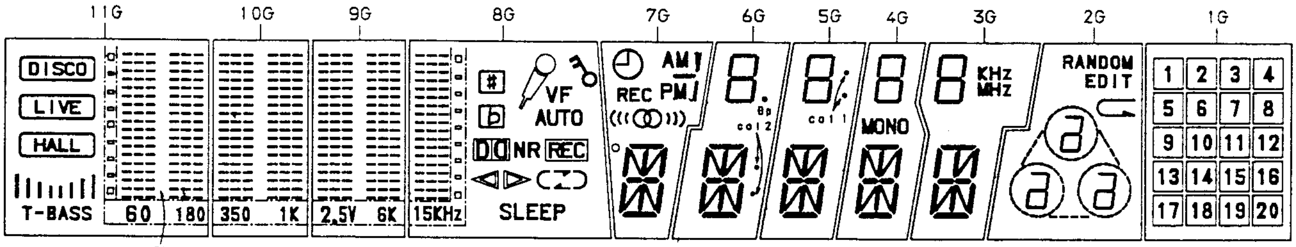

G DECK C.B
IC1
1 2 3
SW1
(CST1)
SW1
(CAM1)
SW2
(CROM1)
SW3
SW2
SW3
(DECK MOTOR)
M1
M
- + H L
SOL1
(DECK1)
+
H
L
SW4
(REA2)
SW4
SW5
(CROM2)
SW5
FROM B FRONT C.B
CN502
15 13 11 9 7 5 3 1
FT101
CON501
IC2
1 2 3
SW6
(CST2)
SW6
R1
R2
R3
Q1
B C E
SW8
(CAM2)
SW8
SFR1
SW9
(REB2)
SW9
SOL2
(DECK2)

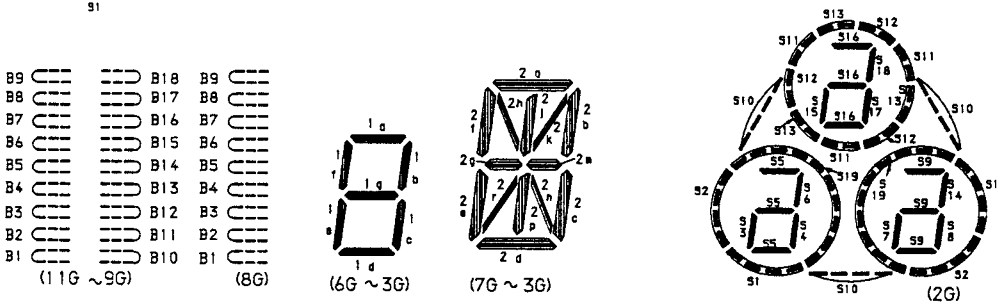

H HEAD-1 C.B
P HEAD (DECK-1)
<WHT>
<BLK>
<RED>
<GRY>
<WHT>
<BLK>
<RED>
1
3
CON301
TO A MAIN C.B
PIN301
<BLK>
<RED>
<WHT>


I HEAD-2 C.B
RP HEAD (DECK-2)
<WHT>
<RED>
<BLK>
<WHT>
<RED>
<WHT>
<WHT>
<GRY>
<BLK>
<BLK>
<WHT>
<WHT>
<RED>
<RED>
<WHT>
1
3
5
7
8
CON351
TO A MAIN C.B
PIN351
<BLU>
<BRN>
<YEL>
<BLK>
<RED>
<WHT>

FL GRID ASSIGNMENT & ANODE CONNECTION
FL:BJ377GK

GRID ASSIGNMENT


11G
10G
9G
8G
7G
6G
5G
4G
3G
2G
1G
DISCO
LIVE
HALL
T-BASS
60
180
350
1K
2.5V
6K
15KHz
S1
#
b
VF
AUTO
DD NR
REC
SLEEP
AM
PM
REC
Dp
col 2
col 1
MONO
KHz
MHz
RANDOM
EDIT
1 2 3 4
5 6 7 8
9 10 11 12
13 14 15 16
17 18 19 20


B9 B8 B7 B6 B5 B4 B3 B2 B1
B18 B17 B16 B15 B14 B13 B12 B11 B10
(11G ~9G)
(8G)
1a 1b 1c 1d 1e 1f 1g
(6G ~3G)
2a 2b 2c 2d 2e 2f 2g 2h 2j 2k 2m 2n 2p 2r
(7G ~ 3G)
S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17 S18 S19
(2G)

ANODE CONNECTION

	G11	G10	G9	G8	G7	G6	G5	G4	G3	G2	G1
P1	S1 DISCO LIVE HALL T-BASS	S1	S1	S1 ⇄	2d	2d	2d	2d	2d	S1	**20**
P2	(DISCO)	—	—	)	2j, 2p	2j, 2p	2j, 2p	2j, 2p	2j, 2p	S2	**19**
P3	(LIVE)	—	—	(#)	2n	2n	2n	2n	2n	S3	**18**
P4	(HALL)	—	—	(b)	2r	2r	2r	2r	2r	S4	**17**
P5	|||...||	—	—	(	2c	2c	2c	2c	2c	S5	**16**
P6	B1, B10	B1, B10	B1, B10	B1	2e	2e	2e	2e	2e	S6	**15**
P7	B2	B2	B2	B2	2m	2m	2m	2m	2m	S7	**14**
P8	B11	B11	B11	**SLEEP**	2g	2g	2g	2g	2g	S8	**13**
P9	B3	B3	B3	B3	2f	2f	2f	2f	2f	S9	**12**
P10	B12	B12	B12	**DD NR**	2b	2b	2b	2b	2b	S10	**11**
P11	B4	B4	B4	B4	2k	2k	2k	2k	2k	S11	**10**
P12	B13	B13	B13	◁	2h	2h	2h	2h	2h	S12	**9**
P13	B5	B5	B5	B5	2a	2a	2a	2a	2a	S13	**8**
P14	B14	B14	B14	▷	○	col	col [UP]	**MONO**	**MHz**	S14	**7**
P15	B6	B6	B6	B6	(((⦾)))	Dp	col [DOWN]	—	**KHz**	S15	**6**
P16	B15	B15	B15	**REC**	**REC**	1d	1d	1d	1d	S16	**5**
P17	B7	B7	B7	B7	🕘	1e	1e	1e	1e	S17	**4**
P18	B16	B16	B16	**AUTO**	**PM**	1c	1c	1c	1c	S18	**3**
P19	B8	B8	B8	B8	**AM**	1g	1g	1g	1g	S19	**2**
P20	B17	B17	B17	🎤 VF	—	1f	1f	1f	1f	⮌	**1**
P21	B9	B9	B9	B9	/	1b	1b	1b	1b	**EDIT**	▦
P22	B18	B18	B18	🔑	—	1a	1a	1a	1a	**RANDOM**	—
P23	—	—	—	# b	—	—	—	—	—	—	—

IC DESCRIPTION

IC, μPD78044BGF-013

Pin No.	Pin Name	I/O	Description
1~7	G7 ~G1	O	FL grid output.
8	VDD	–	Power supply terminal. (+5.6V)
9	IO-BUS3	I/O	Data bus 3 for CD.
10	IO-BUS2	I/O	Data bus 2 for CD.
11	IO-BUS1	I/O	Data bus 1 for CD.
12	IO-BUS0	I/O	Data bus 0 for CD.
13	O-$\overline{\text{CCE}}$	O	CD data enable.
14	O-BUCLK	O	CD data clock.
15	O-$\overline{\text{KSCAN}}$	O	Key scan enable.
16	I-$\overline{\text{HOLD}}$	I	When supply is cut, the controller in "HOLD" state. (clock stop and memory maintain)
17	RESET	I	System reset input.
18	O-$\overline{\text{POWER}}$	O	System power supply $\overline{\text{ON}}$/OFF output.
19	MVR +	O	Increase master volume control.
20	AVSS	–	GND.
21	MVR –	O	Decrease master volume control.
22	I-SPEANA	I	Spectrum analyzer level input.
23	I-CD SW	I	CD switch signal.
24	I-DISH	I	CD dish position.
25	I-MIC	I	Mic input level.
26	I-MS	I	Music sensor input level.
27	I-KEY 1	I	Key matrix 1 input.
28	I-KEY 2	I	Key matrix 2 input.
29	AVDD	–	Analog VDD tied to VDD.
30	AVREF	–	A/D reference voltage.
31	I-$\overline{\text{STEREO}}$	I	Tuner stereo on.
32	NC	–	Not connected.
33	VSS	–	GND.
34, 35	X1, X2	–	4.194MHz clock oscillator input.
36	O-CLOSE	O	CD tray close.
37	O-OPEN	O	CD tray open.
38	O-PLLCE	O	Data enable for PLL IC.
39	O-DATA	O	Serial data.
40	O-CLK	O	Serial clock.
41	O-FSTB	O	Strobe signal for front control shift register.
42	O-MSTB	O	Strobe signal for front control shift register.
43	I-$\overline{\text{TUNE}}$/IFT	I	Tuner detected input or IF count serial data input.
44	O-$\overline{\text{MUTE}}$	O	Mute ON/$\overline{\text{OFF}}$.
45	O-DISH RVS	O	CD dish rotate in forward rotation.
46	O-DISH FWD	O	CD dish rotate in reverse rotation.
47	I-$\overline{\text{RMC}}$	I	System remote controller input.
48	IC	–	Internal connection. (connected to GND)

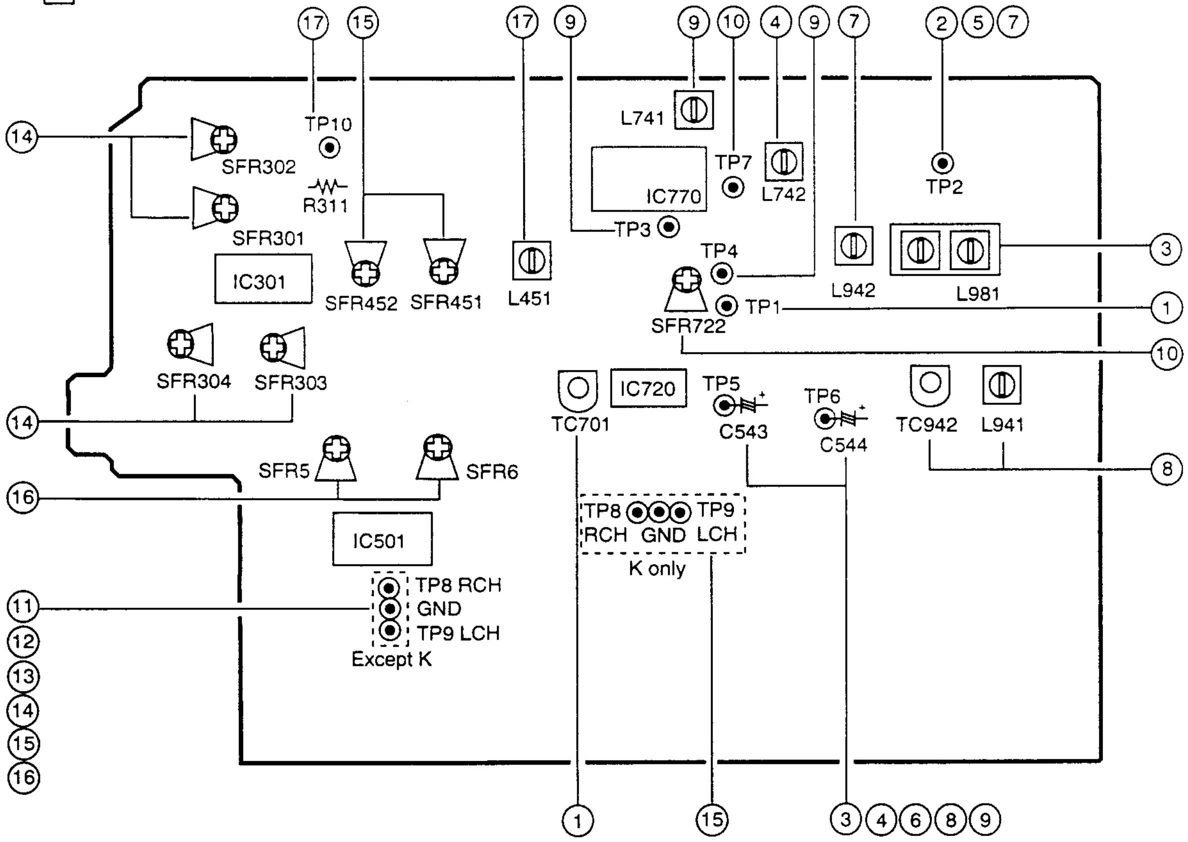
Pin No.	Pin Name	I/O	Description
49	O-SOL 2	O	Mechanism solenoid drive control output to DECK 2. "L" when ON.
50	O-SOL 1	O	Mechanism solenoid drive control output to DECK 1. "L" when ON.
51	O-MOTOR	O	Mechanism main motor drive control output to DECKs. "L" when ON.
52	VDD	–	Power supply terminal. (+5.6V)
53	O-KSTB	O	Key control data strobe.
54	$\overline{\text{CST 1}}$	I/O	Deck 1 cassette switch / FL segment A.
55	$\overline{\text{CAM 1}}$	I/O	Deck 1 play input / FL segment B.
56	$\overline{\text{AUTO 1}}$	I/O	Deck 1 auto stop / FL segment C.
57	$\overline{\text{AUTO 2}}$	I/O	Deck 2 auto stop / FL segment D.
58	$\overline{\text{CAM 2}}$	I/O	Deck 2 play input / FL segment E.
59	$\overline{\text{REB}}$	I/O	Deck 2 side B recordable / FL segment F.
60	$\overline{\text{CST 2}}$	I/O	Deck 2 cassette switch / FL segment G.
61	$\overline{\text{REA}}$	I/O	Deck 2 side A recordable / FL segment H.
62	LW	I/O	LW select input / FL segment I.
63	OIRT	I/O	OIRT select input / FL segment J.
64	AM10K	I/O	AM10K step input / FL segment K.
65	NO DOLBY	I/O	NO DOLBY select / FL segment L.
66	K-CON	I/O	Key control select / FL segment M.
67	TMBASE	I/O	8Hz time base input / FL segment N.
68	K.TBASS	I/O	T-BASS button pressed / FL segment O.
69	SPEANA C	O	Spectrum analyzer C signal / FL segment P.
70	SPEANA B	O	Spectrum analyzer B signal / FL segment Q.
71	VLOAD	–	Negative pulldown voltage for FL.
72	SPEANA A	O	Spectrum analyzer C signal / FL segment R.
73	S	O	FL segment S.
74	T	O	FL segment T.
75	U	O	FL segment U.
76	V	O	FL segment V.
77~80	G11~G8	O	FL grid output.

IC, M65840FP

Pin No.	Pin Name	I/O	Description
1	ADCONT	–	ADM A/D adaptive control.
2	DA1CONT	–	ADM D/A1 adaptive control.
3	DA2CONT	–	ADM D/A2 adaptive control.
4	TEST 1	I	"L"=normal fn mode, "H"=test mode.
5	XIN	I	16MHz ceramic resonator
6	XOUT	O	
7	DATA	I	Serial bus data input.
8	CLK	I	Serial bus clock input.
9	STROBE	I	Serial bus strobe input.
10	TEST 2	O	Test output.
11	TEST 3	O	Test output.
12	REF	–	Analog 1/2VCC.
13	GND	–	GND.
14	VCC	–	Supply voltage.
15	MIXOUT	O	Mixing key controlled low frequency signal and through output of high frequency signal.
16	MIXIN	I	
17	LPF2 OUT	O	Forms low pass filter with external CR for digital key control.
18	LPF2 IN	I	
19	HPF OUT	O	Forms high pass filter with external CR for through output of high frequency signal.
20	HPF IN	I	
21	LPF1 OUT	O	Forms pre-low pass filter with external CR for digital key control.
22	LPF1 IN	I	
23	AD INT IN	I	Forms integrator with external capacitor.
24	AD INT OUT	O	
25	DA1 INT IN	I	
26	DA1 INT OUT	O	
27	DA2 INT IN	I	
28	DA2 INT OUT	O	

ADJUSTMENT–1 (TUNER)

A MAIN C.B



⑰ ⑮ ⑰ ⑨ ⑨ ⑩ ④ ⑨ ⑦ ② ⑤ ⑦
TP10
SFR302
R311
SFR301
IC301
SFR452
SFR451
L451
L741
IC770
TP7
L742
TP3
TP4
TP1
SFR722
L942
L981
TP2
SFR304
SFR303
TC701
IC720
TP5
C543
TP6
C544
TC942
L941
SFR5
SFR6
IC501
TP8 RCH GND LCH TP9
K only
TP8 RCH
GND
TP9 LCH
Except K
⑭ ⑭ ⑯ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯
③ ① ⑩ ⑧
① ⑮ ③ ④ ⑥ ⑧ ⑨

< TUNER SECTION >

1. Clock Frequency Adjustment
   Settings : • Test point : TP1
   • Adjustment location : TC701
   Method : Set to MW 1710kHz (LH), 1602kHz (HE,HR,EE,EZ,EEZ,K,G) and adjust TC701 so that the test point becomes 2160kHz ± 0.01kHz (LH), 2052kHz ± 0.01kHz (HE,HR,EE,EZ,EEZ,K,G)

2. MW VT Check
   Settings : • Test point : TP2 (VT)
   Method : Set to MW 1710kHz (LH), 1602kHz (HE,HR,EE,EZ,EEZ,K,G) and check that the test point is 7.0V ± 1.0V.

3. MW Tracking Adjustment
   ·Settings : • Test point : TP-5, TP-6
   • Adjustment location :
   L981 .... 999kHz (HE,HR,EE,EZ,EEZ,K,G)
   L981 .... 1000kHz (LH)
   Method : Set to MW 999kHz (HE,HR,EE,EZ,EEZ,K,G), MW 1000kHz (LH) and the level is adjusted to MAX by L981 (less than 56dB).

4. AM IF Adjustment
   Settings : • Test point : TP-5, TP-6
   L742 .... 999kHz (HE,HR,EE,EZ,EEZ,K,G)
   L742 ....1000kHz (LH)
   Method : Set to MW 999kHz (HE,HR,EE,EZ,EEZ,K,G), MW 1000kHz (LH) and adjust L742 so that the test point becomes maximum.

5. FM VT Check
   Settings : • Test point : TP2 (VT)
   Method : Set to FM 87.5MHz and check that test point is more than 1.0V (HE,HR,LH), 1.5V (EE,EZ,EEZ,K). Then, set to FM 108MHz abd check that the test point is less than 8.0V (HE,HR,LH), 8.2V (EE,EZ,EEZ,K).

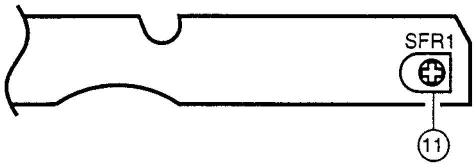
6. FM Tracking Check
   Settings : • Test point : TP-5, TP-6
   Method : Set to FM 98.0MHz and check that the test point is 6 ± 4dB (EE,EZ,EEZ,K), 2 + 10dB/2 – 6dB. (HE.HR,LH,G)

7. LW VT Adjustment <EE,EZ,EEZ,K>
   Settings : • Test point : TP2 (VT)
   • Adjustment location : L942
   Method : Set to LW 144kHz and adjust L942 so that the test point becomes 1.5V ± 0.05V.

8. LW Tracking Adjustment <EE,EZ,EEZ,K>
   Settings : • Test point : TP5,TP6
   • Adjustment location :
   L941 .... 144kHz
   TC942 .... 290kHz
   Method : Set up TC942 to center before adjustment. The level at 144kHz is adjusted to MAX by L941. Then the level at 290kHz is adjusted to MAX by TC942.

9. DC Balance / Mono Distortion Adjustment
Settings : • Test point : TP3, TP4 (DC balance)
TP5, TP6 (Distortion)
• Adjustment location : L741
• Input level : 54dB
Method : Set to FM 98.0MHz and adjust L741 so that the voltage between TP3 and TP4 becomes 0V ± 0.04V. Next, check that the distortion is less than 1.3%.

G DECK C.B



< DECK SECTION >

11. Tape Speed Adjustment
Settings : • Test tape : TTA–100
• Test point : TP8, TP9
• Adjustment location : SFR1
Method : Play back the test tape by DECK 2 and adjust SFR1 so that the frequency counter reads 3000Hz ± 5Hz.

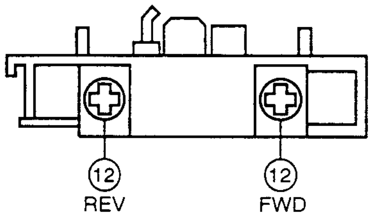
12. Head Azimuth Adjustment
Settings : • Test tape : TTA–300
• Test point : TP8, TP9
• Adjustment location : Head azimuth adjustment screw
Method : Play back the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on each FWD PLAY and REV PLAY mode.

13. PB Frequency Response Check (DECK 1, DECK 2)
Settings : • Test tape : TTA–300
• Test point : TP8, TP9
Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal is with respect to that of the 315Hz signal is 0 ± 2dB.

14. PB Sensitivity Adjustment (except K)
Settings : • Test tape : TTA–200
• Test point : TP8, TP9
• Adjustment location : SFR301 (DECK 1, Lch)
SFR302 (DECK 1, Rch)
SFR303 (DECK 2, Lch)
SFR304 (DECK 2, Rch)
Method : Play back the test tape and adjust SFRs so that the output level of the test point becomes 300mV.

10. Auto Stop Level Adjustment
Settings : • Test point : TP7
• Adjustment location : SFR722
• Input level : 23dB
Method : Set to FM 98.0 MHz and adjust voltage low (about 0.01V) by SFR722. After that voltage high (about 7.0V) by 2dB down.

DECK–1 P, DECK–2 R / P / E HEAD



15. REC/PB Frequency Response Adjustment
Settings : • Test tape : TTA–602
• Test point : TP8, TP9
• Input signal : 1kHz / 10kHz (LINE IN)
• Adjustment location : SFR451 (Lch)
SFR452 (Rch)
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8 TP9 becomes 210mV. Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output of the 10kHz signals becomes 0dB ± 0.5dB with respect to that of the 1kHz signal.

16. REC/PB Sensitivity Adjustment (except K)
Settings : • Test tape : TTA–602
• Test point : TP8, TP9
• Input signal : 1kHz (LINE IN)
• Adjustment location : SFR5 (Rch)
SFR6 (Lch)
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 21mV. Record and play back the 1kHz signals and adjust SFRs so that the output is 21mV ± 0.5dB.

17. Bias OSC Frequency Adjustment
Settings : • Test tape : TTA–601
• Test point : TP10 (R311)
• Adjustment location : L451
Method : Set to the REC mode. Adjust L451 so that the frequency counter of the test point becomes minimum.

PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

IHF sensitivity :	3dB + 10dB / 3dB – 6dB [HE,HR,LH,G] 6dB + 10dB / 6dB – 6dB [EE,EZ,EEZ,K]
S/N 50dB Quieting sensitivity :	less than 36dB (87.5 / 98.0 / 108.0MHz)
Signal to noise ratio :	More than 64dB (98.0MHz)
Distortion :	Less than 1.2%
Stereo separation :	More than 25dB (98.0MHz) [HE,HR,LH,G] More than 22dB (98.0MHz) [EE,EZ,EEZ,K]
Intermediate frequency :	10.7MHz

<MW SECTION>

Sensitivity : (S/N 20 dB)	less than 62dB [at 600kHz (LH)] [at 603kHz (HE,HR,EE,EZ,EEZ,K,G)] less than 59dB [at 1000 / 1400kHz (LH)] [at 999 / 1404kHz (HE,HR,EE,EZ,EEZ,K,G)]
Distortion :	Less than 1.5% [at 1000kHz (LH)] [at 999kHz (HE,HR,EE,EZ,EEZ,K,G)]
Intermediate frequency :	450kHz

<LW SECTION> (EE,EZ,EEZ,K)

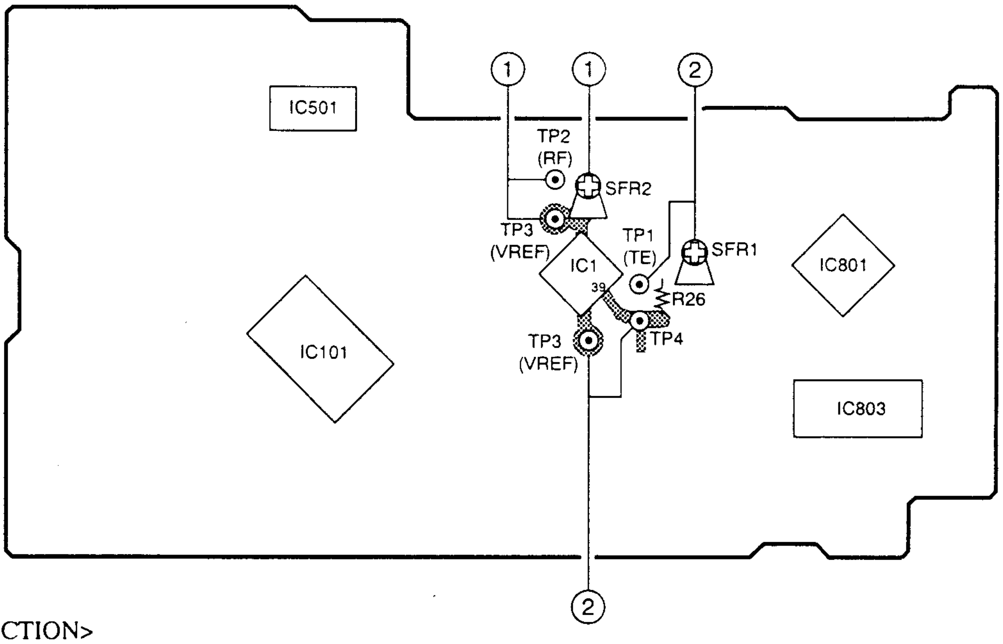
Sensitivity : (S/N 20dB)	66 ± 5dB (144kHz) 63 ± 5dB (198kHz) 62 ± 5dB (290kHz)
Distortion :	Less than 1.5% (198kHz)
Intermediate frequency :	450kHz

<DECK SECTION>

Tape speed :	3000Hz ± 45Hz
Wow & flutter :	Less than 0.4% (R.M.S)
Take-up torque :	30 ~ 55g-cm (FWD, REV)
F.F / REW torque :	75 ~ 180g-cm
Back tension :	2 ~ 7g-cm (FWD, REV)
PB Output level :	2.5V ± 1.5dB
REC/PB Output level :	1.5V ± 2dB
Distortion (REC/PB) :	Less than 2.0% (NORM, CrO2)
Noise level (PB) :	Less than 170mV (DOLBY NR ON / OFF CrO2, Vol MAX.) Less than 200mV (DOLBY NR ON / OFF NORM. Vol MAX.)
Noise level (REC/PB) :	Less than 23 / 7.5mV (DOLBY NR ON / OFF, CrO2) Less than 35 / 12mV (DOLBY NR ON / OFF, NORM)
Crosstalk :	60dB (1kHz, 0VU)
Channel separation :	More than 40dB (1kHz, 0VU)
Erasing ratio :	More than 60dB (at 125Hz)
Test tape :	NORMAL : TTA–602 CrO2 : TTA–610

ADJUSTMENT – 2 <CD>

3CD C.B

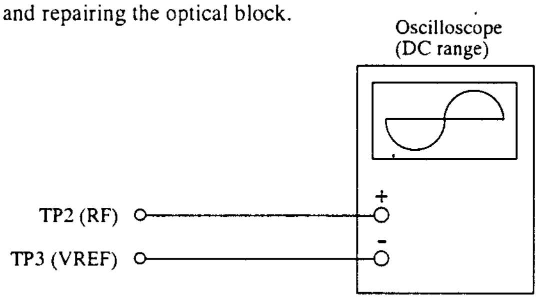


①
①
②
IC501
TP2
(RF)
SFR2
TP3
(VREF)
TP1
(TE)
SFR1
IC801
IC1
39
R26
IC101
TP3
(VREF)
TP4
IC803
②

<CD SECTION>

Note : Connect a probe (10:1) of the frequency counter or the oscilloscope to a test point.

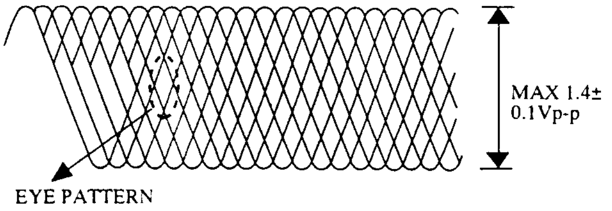
1. Focus Bias Adjustment
   Make the focus bias adjustment when replacing and repairing the optical block.



Oscilloscope
(DC range)
TP2 (RF)
TP3 (VREF)
+
-

1) Connect an oscilloscope to the test points TP2 (RF) and TP3 (VREF).
2) Turn on the power switch.
3) Insert test disc TCD-782 (YEDS-18) and play back the second composition.
4) Adjust SFR2 so that RF signal of the test point TP2 (RF) is MAX and CLEARREST.

RF signal waveform

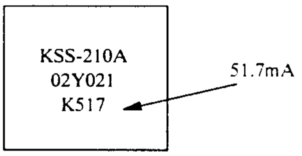


MAX 1.4±
0.1Vp-p
EYE PATTERN

must be CLEAR and MAX

VOLT / DIV: 0.5V
TIME / DIV: 1μs

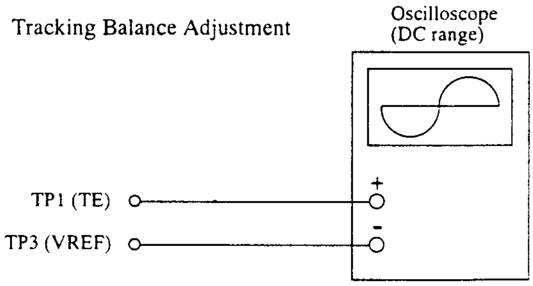
Note : The current of the laser signal can be checked with the voltages on both sides of R2 (10Ω). The difference for the specified value shown on the level must be within ± 6.0mA.



KSS-210A
02Y021
K517
51.7mA

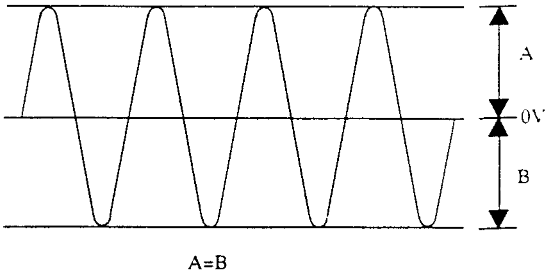
$$\text{Laser current Iop} = \frac{\text{Voltage across R2}}{10\Omega}$$

2. Tracking Balance Adjustment



Oscilloscope
(DC range)
TP1 (TE)
TP3 (VREF)
+
-

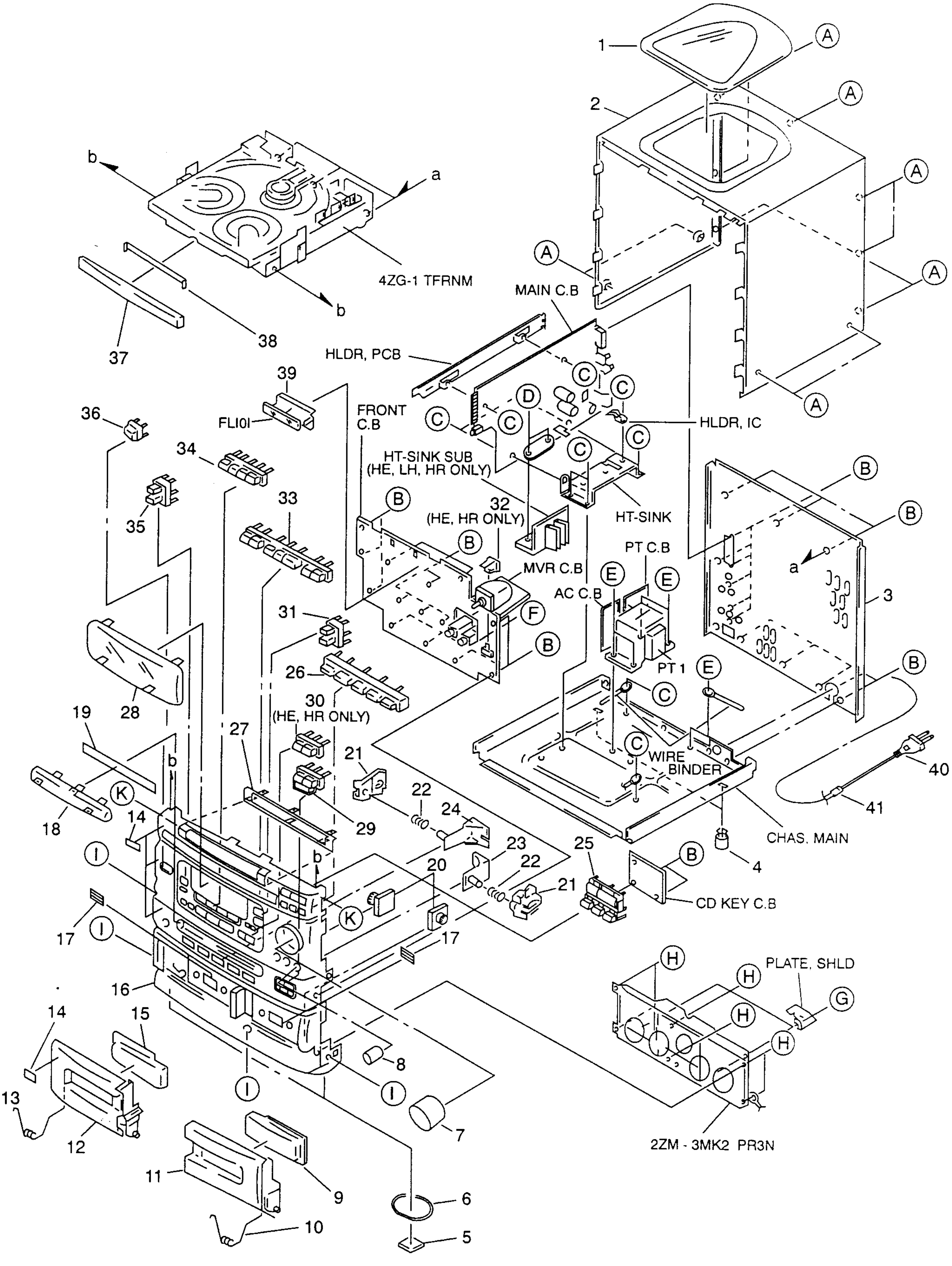
1) Short circuit betweeb TP3 (VREF) and TP4.
2) Connect an oscilloscope to the test points TP1 (TE) and TP3 (VREF).
3) Turn on the power switch.
4) Insert test disc TCD-782 (YEDS-18) and press the PLAY button.
5) Adjust SFR1 so that the waveform on the oscilloscope is vertically symmetrical as shown in the figure below.
6) After the adjustment is completed, remove the connected lead wires from the test point TP3 (VREF) and TP4.



A=B

VOLT / DIV: 200mV
TIME / DIV: 1mS

MECHANICAL EXPLODED VIEW 1/1

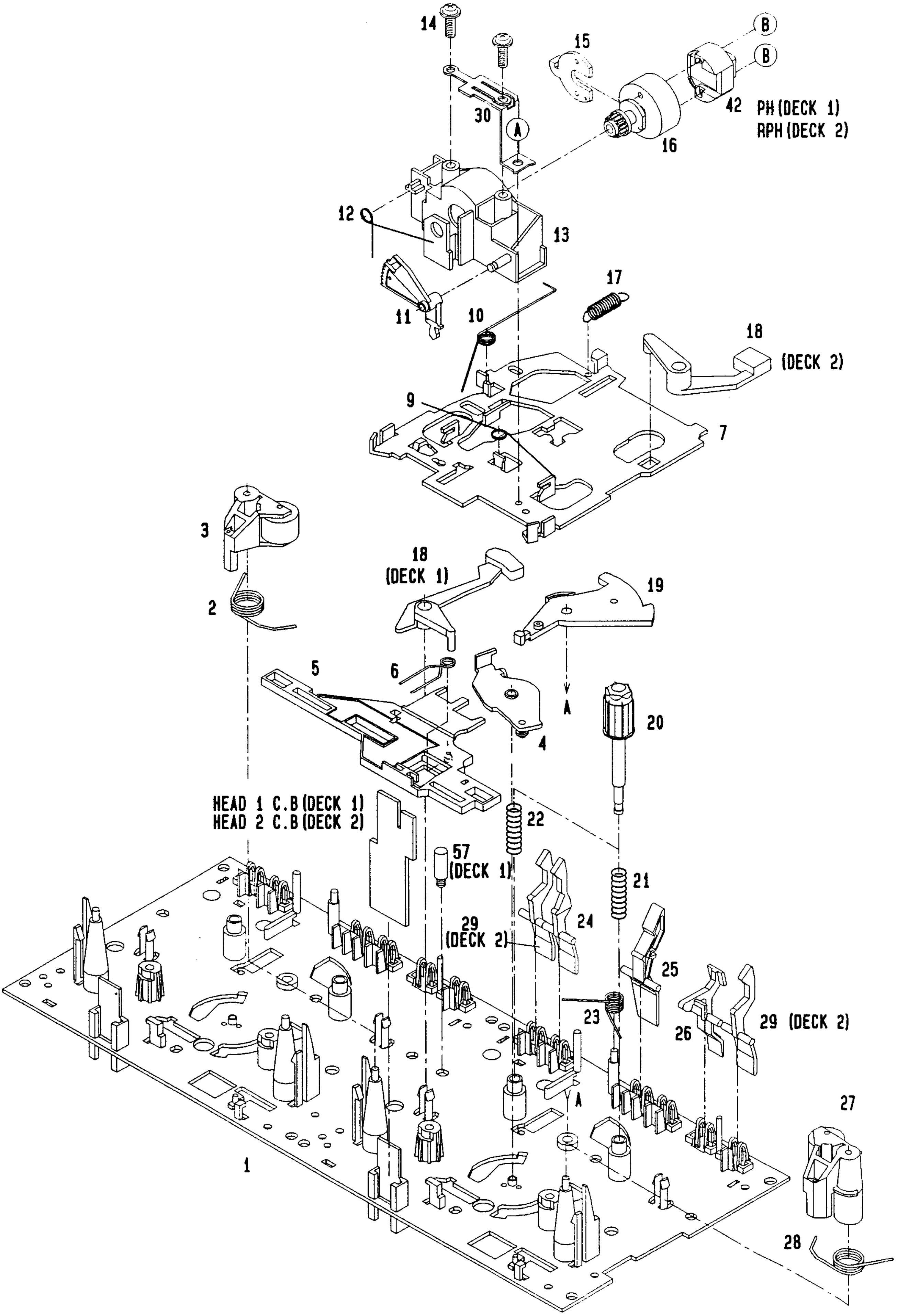

1
A
2
A
A
A
A
A
b
a
4ZG-1 TFRNM
b
37
38
MAIN C.B
HLDR, PCB
C
C
D
C
C
C
C
HLDR, IC
39
36
FLI0I
FRONT
C.B
34
HT-SINK SUB
(HE, LH, HR ONLY)
35
33
B
32
(HE, HR ONLY)
HT-SINK
B
B
B
PT C.B
MVR C.B
AC C.B
E
E
a
3
31
F
B
28
26
PT 1
E
19
30
(HE, HR ONLY)
C
B
27
21
C
WIRE
BINDER
40
K
22
24
41
18
14
29
CHAS. MAIN
I
b
23
22
25
B
4
20
21
K
CD KEY C.B
17
I
17
16
H
PLATE, SHLD
H
G
14
15
H
H
8
13
I
I
7
12
2ZM - 3MK2 PR3N
11
9
6
10
5

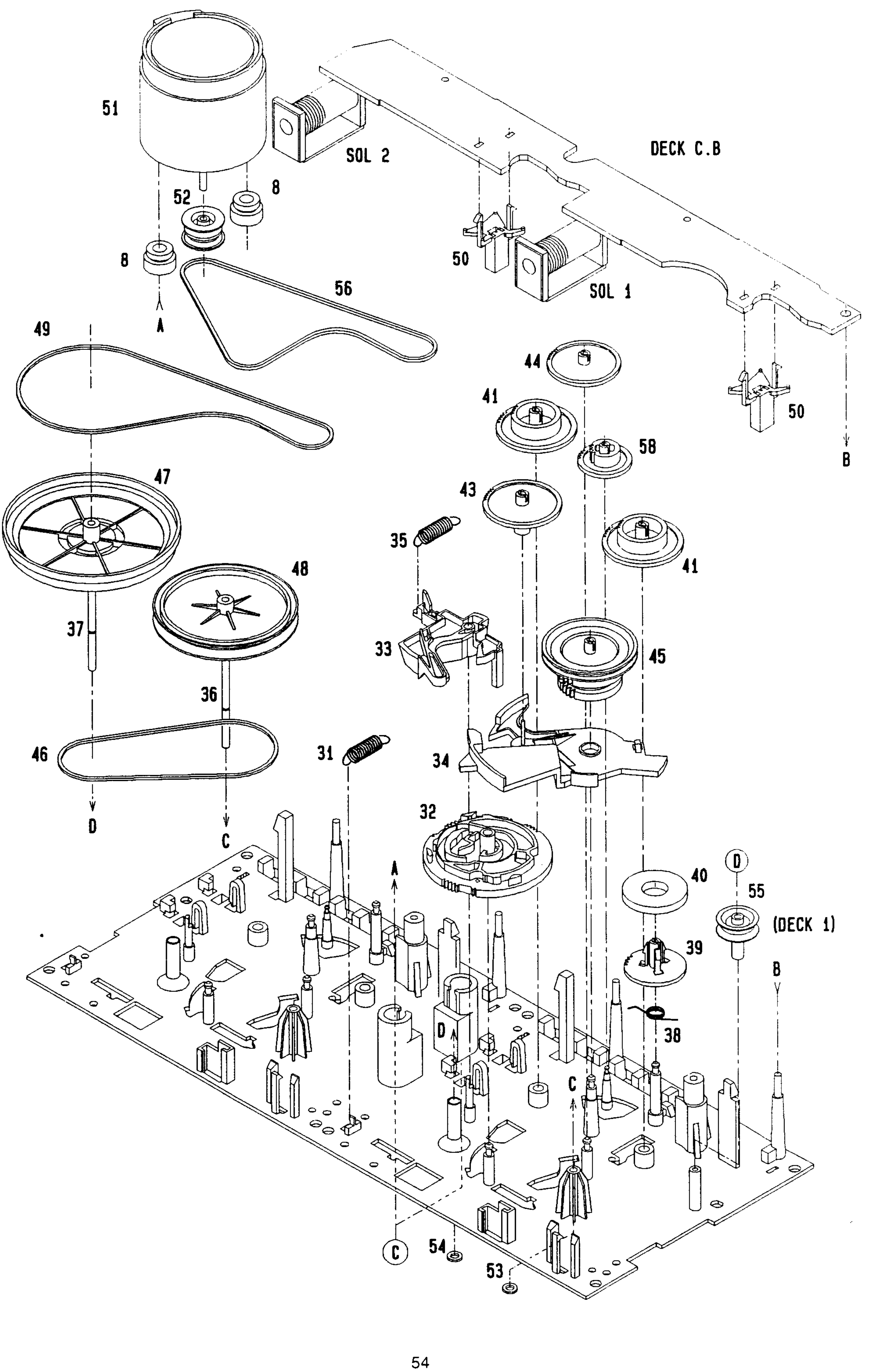
MECHANICAL PARTS LIST 1/1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	85-NF5-031-019		WINDOW,TOP
2	85-MA2-043-019		CAB,STEEL (S)
3	85-MA4-013-019		PANEL,REAR EEBNM<EE>
3	85-MA4-020-019		PANEL,REAR EEBNM2<5EE>
3	85-MA4-034-019		PANEL,REAR EEZBNM<5EEZ>
3	85-MA4-014-019		PANEL,REAR EZBNM<EZ,EEZ>
3	85-MA4-018-019		PANEL,REAR GBNM<G>
3	85-MA4-010-019		PANEL,REAR HEJBNM<HE>
3	85-MA4-012-019		PANEL,REAR HRJBNM<HR>
3	85-MA4-015-019		PANEL,REAR KBNM<K>
3	85-MA4-011-019		PANEL,REAR LHBNM<LH>
4	87-085-224-010		FOOT,H17
5	83-MA1-203-019		FELT,15-20-2 LEG
6	84-VM5-013-010		RING,FOOT
7	85-MA4-066-019		KNOB,VOL
8	81-MX4-019-019		KNOB,MIC
9	85-MA4-028-019		WINDOW,CASS R
10	83-NV4-201-119		SPR-T,EJECT 1
11	85-MA4-022-019		BOX,CASS R<HE,LH,K,HR>
11	87-MA5-024-019		BOX,CASS UR<EXCEPT HE,LH,HR>
12	87-MA5-023-019		BOX,CASS UL<EXCEPT HE,LH,HR>
12	85-MA4-021-019		BOX,CASS L<HE,LH,K,HR>
13	83-NV4-202-119		SPR-T,EJECT 2
14	82-NE8-032-019		BADGE AIWA 27.5
15	85-MA4-027-019		WINDOW,CASS L
16	85-MA4-004-019		CAB,FR E<EZ,EEZ,EE,G>
16	85-MA4-003-019		CAB,FR E2<5EEZ,5EE>
16	85-MA4-001-019		CAB,FR HE<HE,HR>
16	85-MA4-005-019		CAB,FR K<K>
16	85-MA4-002-019		CAB,FR LH<LH>
17	81-532-080-019		LBL,CASS-COMPT
18	85-MA4-030-019		WINDOW,GEQ
19	85-MA4-050-019		PLATE,GEQ
20	87-063-165-019		OIL-DMPR 150
21	82-NF5-229-019		PLATE,LOCK
22	82-NF5-228-019		SPR-C,LOCK
23	82-NF5-226-019		HLDR,LOCK 1N
24	82-NF5-227-019		HLDR,LOCK 2N
25	85-MA4-041-019		KEY,CD
26	85-MA4-044-019		KEY,GEQ
27	85-MA4-029-019		WINDOW,CD
28	85-MA4-031-119		WINDOW,AMP
29	85-MA4-048-019		KEY,ASP
30	85-MA4-049-019		KEY,KARAOKE<HE,HR>
31	85-MA4-047-019		KEY,T-BASS
32	82-MA2-036-019		KNOB,SLIDE DE<HE,HR>
33	85-MA4-043-019		KEY,FUN
34	85-MA4-045-019		KEY,PLAY
35	85-MA4-042-019		KEY,DOLBY
36	85-MA4-046-019		KEY,POWER
37	87-MA5-033-019		PANEL,TRAY U<EXCEPT HE,LH,HR>
37	85-MA4-035-019		PANEL,TRAY<HE,LH,HR>
38	85-MA4-203-019		HLDR,CD
39	81-DS2-204-219		GUIDE,FL
⚠ 40	87-050-079-019		AC CORD ASSY,E (EXCEPT K,G)
40	87-050-081-119		AC CORD ASSY,G (G)
⚠ 40	87-050-100-019		AC CORD ASSY,K3P (K)
⚠ 41	87-085-185-010		BUSHING,AC CORD E
A	87-067-641-019		UTT2+3-8 W/O SLOT BLK
B	87-067-703-019		BVT2+3-10 (W/0 SLOT)
C	87-067-579-019		BVT 2+3-8 W/O SLOT
D	87-067-698-019		BVT 2+3-18 (W/O SLOT)
E	87-067-585-019		BVTT +4-6
F	81-MK1-210-019		S-SCREW BFT2+3-16
G	87-571-032-419		VIT+2-3
H	87-067-758-019		BVT2+3-12 W/O SLOT
I	87-591-094-419		QIT + 3 - 6 GOLD
J	87-067-945-019		VFT2+3-12 (F10)

TAPE MECHANISM EXPLODED VIEW 1/1


14
B
B
15
30
A
42
PH (DECK 1)
RPH (DECK 2)
16
12
13
17
11
10
18
(DECK 2)
9
7
3
18
(DECK 1)
19
2
5
6
4
A
20
22
HEAD 1 C.B (DECK 1)
HEAD 2 C.B (DECK 2)
57
(DECK 1)
21
24
29
(DECK 2)
25
23
26
29 (DECK 2)
A
27
1
28

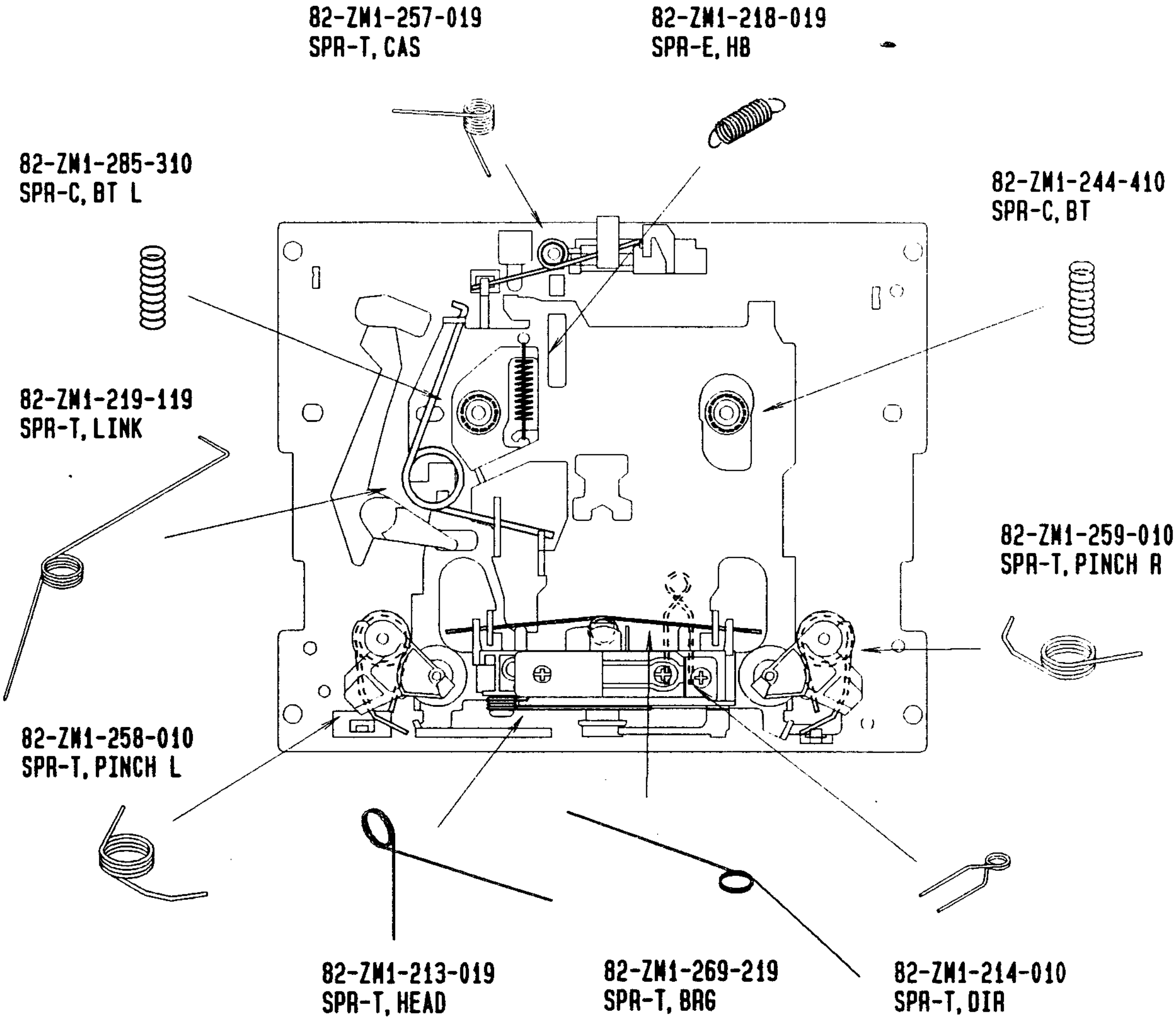

SOL 2
DECK C.B
SOL 1
A
B
D
C
A
D
(DECK 1)
B
D
C
C

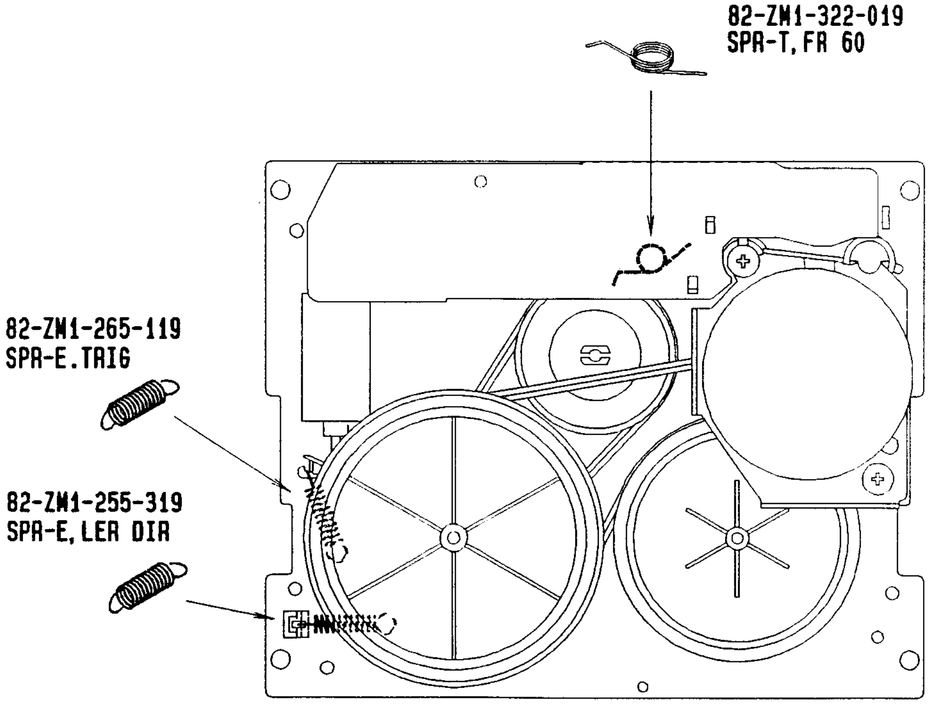
TAPE MECHANISM PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

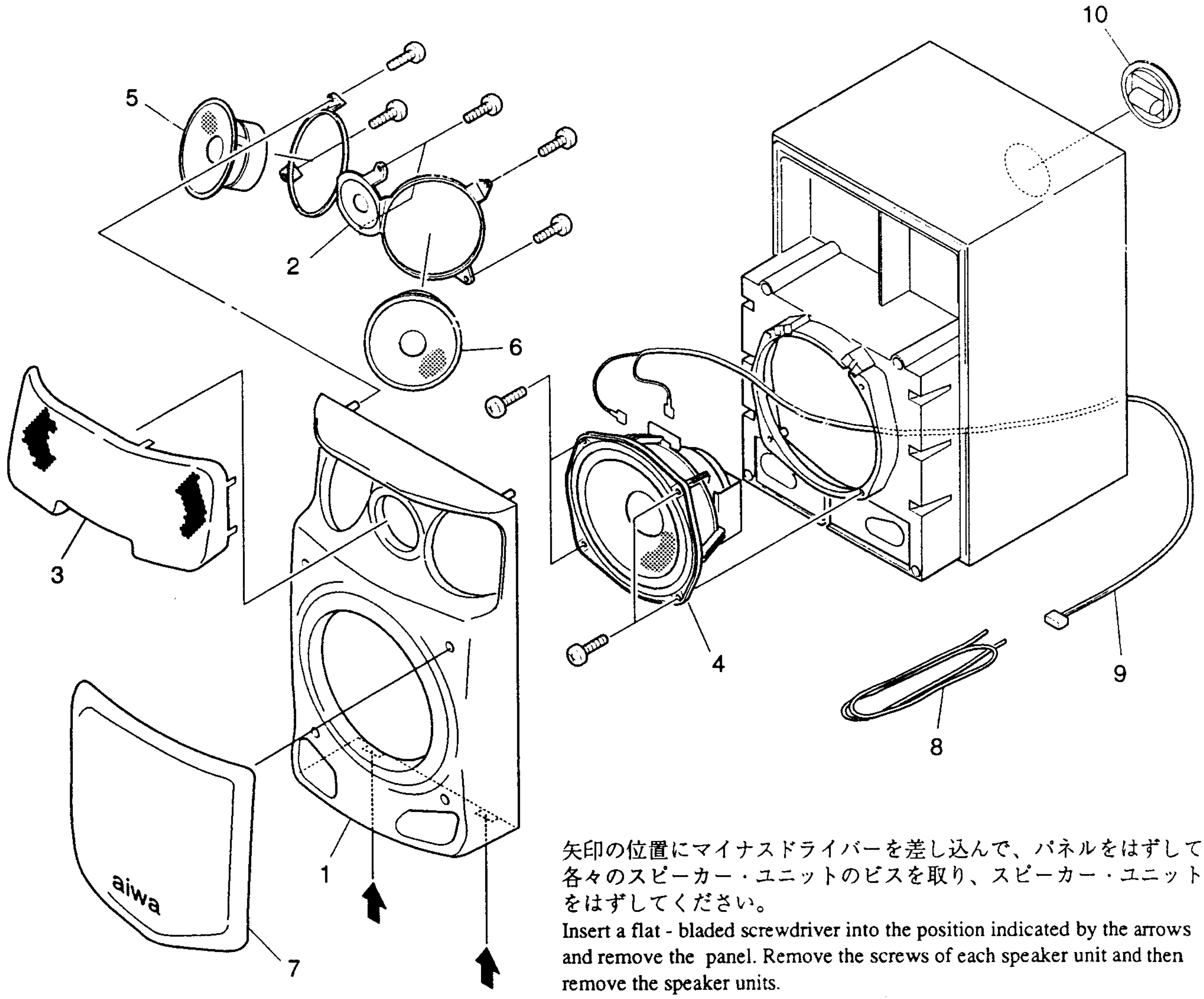
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	82-ZM3-301-019		CHAS ASSY,M2
2	82-ZM1-258-010		SPR-T,PINCH L
3	82-ZM1-248-419		LVR ASSY,PINCH L
4	82-ZM1-295-31K		PLATE ASSY,LINK
5	82-ZM1-266-11K		LVR,DIR
6	82-ZM1-214-010		SPR-T,DIR
7	82-ZM1-206-61K		CHAS,HEAD
8	82-ZM3-307-019		CUSH-G,DIA3.7-8-3.2
9	82-ZM1-269-219		SPR-T,BRG
10	82-ZM1-219-119		SPR-T,LINK
11	82-ZM1-210-019		GEAR,H T
12	82-ZM1-213-019		SPR-T,HEAD
13	82-ZM1-207-519		GUIDE,TAPE
14	82-ZM1-283-310		S-SCREW,AZIMUTH
15	82-ZM1-314-119		PLATE,HEAD
16	82-ZM1-208-019		HLDR,HEAD
17	82-ZM1-218-019		SPR-E,HB
18	82-ZM1-263-110		LVR,EJECT L (DECK 1)
18	82-ZM1-264-010		LVR,EJECT R (DECK 2)
19	82-ZM1-222-11K		LVR,PLAY
20	82-ZM1-217-319		REEL TABLE
21	82-ZM1-244-410		SPR-C,BT
22	82-ZM1-285-310		SPR-C,BT L
23	82-ZM1-257-019		SPR-T,CAS
24	82-ZM1-241-319		LVR,MC
25	82-ZM1-242-019		LVR,CAS
26	82-ZM1-243-019		LVR,STOP
27	82-ZM1-253-419		LVR ASSY,PINCH R
28	82-ZM1-259-010		SPR-T,PINCH R
29	82-ZM1-240-11K		LVR,REC (DECK 2)
30	82-ZM1-298-010		SPR-P,EARTH
31	82-ZM1-255-319		SPR-E,LVR DIR
32	82-ZM3-305-01K		GEAR,CAM M2
33	82-ZM1-227-21K		LVR,TRIG
34	82-ZM3-306-01K		LVR,FR M2
35	82-ZM1-265-119		SPR-E,TRIG
36	82-ZM1-313-019		CAPSTAN N 2-41.5
37	82-ZM1-312-019		CAPSTAN N 2.2-41.7
38	82-ZM1-322-019		SPR-T,FR60
39	82-ZM1-220-219		GEAR,IDLER
40	82-ZM1-316-010		RING MAGNET 3
41	82-ZM1-216-21K		GEAR,REEL
42	87-046-398-019		HEAD,PH YK50P-BS409(PH)
42	87-046-399-019		HEAD,RPH YK56R-BS409(RPH)
43	82-ZM1-225-11K		GEAR,FR
44	82-ZM1-226-019		GEAR,REW
45	82-ZM1-228-510		SLIP DISK ASSY
46	82-ZM1-328-010		BELT FR2(DECK 1)
46	82-ZM1-335-010		BELT FR2M(DECK 2)
47	82-ZM1-238-61K		FLY-WHL ASSY,R (DECK 2)
47	82-ZM3-210-51K		FLY-WHL ASSY,R2 (DECK 1)
48	82-ZM1-235-31K		FLY-WHL ASSY,L (DECK 2)
48	82-ZM3-208-41K		FLY-WHL ASSY,L2 (DECK 1)
49	82-ZM3-313-019		BELT R10
50	82-ZM1-245-210		HLDR,IC
51	87-045-347-019		MOT,SHU2L 70(M1)
52	82-ZM3-202-019		PULLEY,MOT 2M
53	82-ZM1-288-019		SH,1.63-3.2-0.5 SLT
54	80-ZM6-243-019		SH,1.75-3.6-0.5 SLT
55	82-ZM3-304-010		PULLEY,COUPLER (DECK 1)
56	82-ZM3-312-019		BELT P10
57	82-ZM3-216-019		SHAFT,COUPLER N(DECK 1)
58	82-ZM1-223-019		GEAR,PLAY
A	82-ZM1-315-010		S-SCREW,GVIDE TAPE
B	80-ZM6-207-019		V+1.6-7
C	82-ZM3-318-019		S-SCRW MOTOR M2
D	87-067-972-019		PW,1.05-3-0.25 SLT

SPRING APPLICATION POSITION


82-ZM1-257-019
SPR-T, CAS
82-ZM1-218-019
SPR-E, HB
82-ZM1-285-310
SPR-C, BT L
82-ZM1-244-410
SPR-C, BT
82-ZM1-219-119
SPR-T, LINK
82-ZM1-259-010
SPR-T, PINCH R
82-ZM1-258-010
SPR-T, PINCH L
82-ZM1-213-019
SPR-T, HEAD
82-ZM1-269-219
SPR-T, BRG
82-ZM1-214-010
SPR-T, DIR


82-ZM1-322-019
SPR-T, FR 60
82-ZM1-265-119
SPR-E. TRIG
82-ZM1-255-319
SPR-E, LER DIR

SPEAKER EXPLODED VIEW 1/1



矢印の位置にマイナスドライバーを差し込んで、パネルをはずして、各々のスピーカー・ユニットのビスを取り、スピーカー・ユニットをはずしてください。

Insert a flat - bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.

SPEAKER PARTS LIST 1/1 (SX-FZ1200 / SX-FZ1500 / SX-FZ1570)

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	85-MS4-001-010		PANEL FR<EXCEPT 1200>
1	84-MS3-001-010		PANEL FR<1200>
2	85-MS3-005-010		ADAPTOR ASSY<EXCEPT 1200>
2	84-MS3-008-010		ADAPTOR ASSY<1200>
3	85-MS4-004-010		SPEAKER GRILL<EXCEPT 1200>
3	84-MS3-005-010		SPEAKER GRILL<1200>
4	85-MS4-607-010		SPEAKER WOOFER<1500YJ,1500YL,1500Y>
4	85-MS4-601-010		SPEAKER WOOFER<1570YJ,1570YL>
4	83-MS3-605-010		SPEAKER WOOFER<1200Y1>
4	84-VS3-601-010		SPEAKER WOOFER<1200YL>
4	82-VS3-601-010		SPEAKER WOOFER<1200Y,1200YJ>
5	85-MS4-603-010		SPEAKER MID<EXCEPT 1200>
5	83-NS5-604-010		SPEAKER MID<1200>
6	85-MS4-605-010		SPEAKER<EXCEPT 1200>
6	83-NS5-606-010		SPEAKER<1200>
7	85-MS4-006-010		GRILL FRAME ASSY<EXCEPT 1200>
7	83-MS3-009-010		GRILL FRAME ASSY<1200>
8	85-MS3-610-010		SPEAKER CORD Y/B<EXCEPT 1200>
8	83-NS5-611-010		SPEAKER CORD Y/B<1200>
9	84-MS3-611-010		SPEAKER CORD ASSY
10	83-NS5-612-010		TERMINAL Y/B<1200>

ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	85-MA4-903-019		IB, E(EGI)-M<EZ,EEZ,EE>
1	85-MA4-902-019		IB, E(ESF)-M<EXCEPT HE,LH,HR,G>
1	85-MA4-901-019		IB, H(ESC)-M<HE,LH,HR,G>
2	85-NF7-641-019		RC, RC-T503
3	87-006-268-019		AM-LOOP ANT NC (UN)
4	87-043-115-01B		ANT,FEEDER FM<HE,LH,HR,G>
4	87-043-106-019		FM, WIRE ANT (Z)<EXCEPT HE,LH,HR,G>
5	87-099-789-019		PLUG,ADPTR IR44<HE,LH,HR>

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, SERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
G—　—	
G—　—	
G—　—	

アイワ株式会社
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Tokyo Japan

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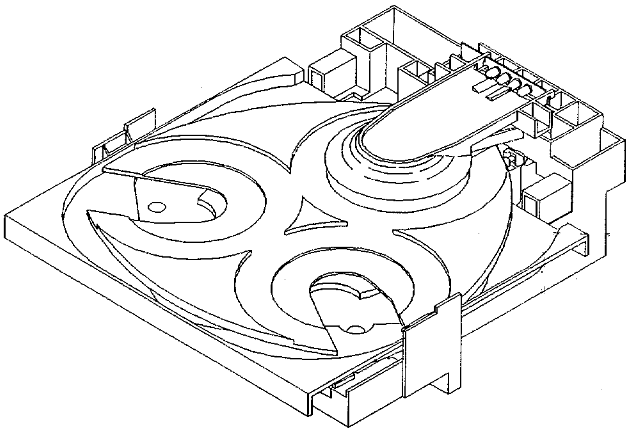
Printed in Singapore

aiwa

aiwa SERVICE

4ZG-1T



CD MECHANISM

SERVICE MANUAL

- BASIC CD MECHANISM: KSM-2101 ABM
- TYPE: English.Japanese

- NOTE : The difference between 4ZG-1 and 4ZG-1T are some electrical components including ICs, and they are not compatible.
- 注意：このサービスマニュアルは、4ZG-１のICがソニーから東芝に変更されたものです。4ZG-1と4ZG-1Tとの互換性はありません。

BASIC NAME	DERIVATION NAME							
4ZG-1T	G	D	F	FJ	R			

- This mechanism has various derivation. Derivation name is indicated by the Service Manual for eath model.
- 本体マニュアルのBASIC CD MECHANISMのサフィックスがDERIVATION NAMEです。組み合わせて使用してください。

- For different version of mechanism that may be introduced since the issue of this manual, only the new or modified points be discussed.
- 本サービスマニュアル発行後の派生メカニズムは新規作成、相異点のみ発行します。

S/M Code No. 09-94C-086-20T

SPECIFICATIONS

ディスク　：コンパクトディスク
読み取り方式　：非接触光学式読み取り（半導体レーザー使用）
復号化　：16 bit直線
ワウ　フラッター　：測定限界以下
映像信号　：NTSC/PAL方式
映像出力端子　：ピンジャック1Vp-p、75Ω、不平衡

G ONLY

Disc	Compact disc
Scanning method	Non contact optical scanner (semiconductor laser application)
Laser	Semiconductor laser ($\lambda = 780$ nm)
No. of channels	2 channels

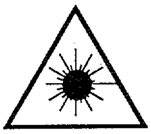
Video signal	NTSC/PAL
Video output	RCA pin jack 1 Vp-p, 75 Ω unbalanced

G ONLY

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

光学ブロック（KSS－210A）交換時の注意

光学系ブロック内のレーザーダイオードは、衣服や人体に帯電した静電荷等で電位差を生じることにより、静電破壊することがあります。人体アース、作業台のアースをとり、衣服が触れぬよう注意して下さい。

1）コネクターを接続後、右図に示すハンダ付けを取り除いて下さい。

Precaution to replace Optical block (KSS－210A)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.

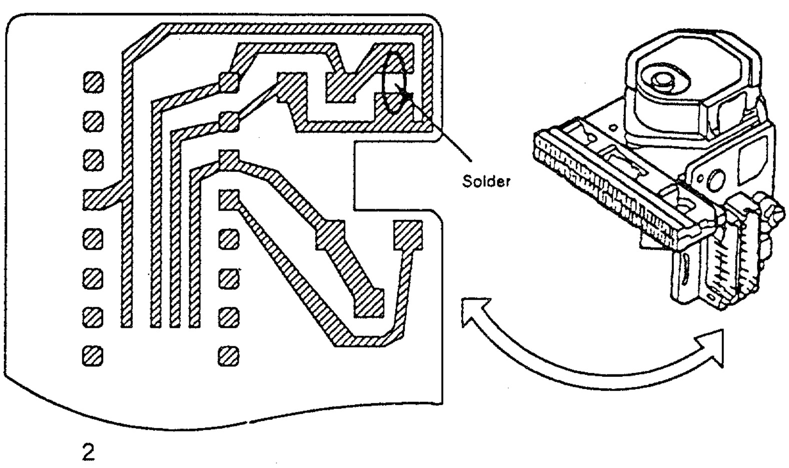
CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!
Usynlig laserstäling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT



ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
IC			
	87-002-407-010	1H	IC, TA8191F
	87-070-101-010	2P	IC, TC9284AF
	87-017-825-010	1E	IC, GP1F32T〈D〉
	87-017-888-080	1A	IC, NJM4558MD
	87-020-501-080	1B	IC, TA78L005AP
	87-017-801-080	1F	IC, TA2058F
	87-001-982-010	1C	IC, TA7291S
	87-017-802-010	2Y	IC, LC7872E〈G〉
	87-017-803-010	2A	IC, LC32464P-80〈G〉
TRANSISTOR			
	87-026-463-080	0E	TR, 2SA933S(RS)
	87-026-297-080	0E	C-TR, DTA144TK
	89-109-521-080	0E	TR, 2SA952K
	89-327-124-080	0E	C-TR, 2SC2712Y
	89-320-011-080	0E	TR, 2SC2001K
	87-026-223-080	0E	C-TR, DTC143TK
	87-026-608-080	0E	C-TR, DTC123JK〈D〉
	89-406-555-089	0E	TR, 2SD655E〈G〉
DIODE			
	87-002-564-080	0E	DIODE, 1SS133 RA
	87-020-465-080	0E	DIODE, 1SS133〈G〉
3CD C.B			
C1	87-010-406-080	0E	CAP, E 22-50 SME
C2	87-010-197-080	0E	C-CAP, S 0.01-25 B
C3	87-010-263-080	0E	CAP, E 100-10
C4	87-010-401-080	0E	CAP, E 1-50 SME
C5	87-010-146-080	0E	C-CAP, S 2P-50 CH
C6	87-010-196-080	0E	C-CAP, S 0.1-25 F
C7	87-010-316-080	0E	C-CAP, S 33P-50 CH
C8	87-010-322-080	0E	C-CAP, S 100P-50 CH
C9	87-012-141-080	0E	C-CAP, S 0.22-16 F
C10	87-010-545-040	0E	CAP, E 0.22-50 SME
C11	87-010-265-080	0E	CAP, E 33-16 SME
C12	87-010-193-080	0E	C-CAP, S 0.033-25 F
C13	87-010-197-080	0E	C-CAP, S 0.01-25 B
C14	87-010-248-080	0E	CAP, E 220-10 SME
C15	87-010-374-080	0E	CAP, E 47-10
C16	87-010-403-080	0E	CAP, E 3.3-50 SME
C17	87-010-213-080	0E	C-CAP, S 0.015-50 B
C18	87-012-365-080	0E	C-CAP, S 0.027-25V BK
C19	87-010-189-080	0E	C-CAP, S 8200P-50 B
C20	87-010-198-080	0E	C-CAP, S 0.022-25 B
C21	87-010-320-080	0E	C-CAP, S 68P-50 CH
C22	87-010-187-080	0E	C-CAP, S 5600P-50 B
C23	87-010-263-040	0E	CAP, E 100-10
C24	87-010-197-080	0E	C-CAP, S 0.01-25 B
C101	87-010-197-080	0E	C-CAP, S 0.01-25 B
C102	87-010-197-080	0E	C-CAP, S 0.01-25 B
C103	87-010-374-040	0E	CAP, E 47-10
C104	87-010-374-040	0E	CAP, E 47-10
C106	87-010-197-080	0E	C-CAP, S 0.01-25 B
C107	87-010-404-040	0E	CAP, E 4.7-50 SME
C108	87-010-197-080	0E	C-CAP, S 0.01-25 B
C109	87-010-248-080	0E	CAP, E 220-10 SME
C110	87-010-263-080	0E	CAP, E 100-10
C111	87-010-178-080	0E	C-CAP, S 1000P-50 B
C112	87-010-197-080	0E	C-CAP, S 0.01-25 B
C113	87-010-184-080	0E	C-CAP, S 3300P-50 B
C114	87-010-263-040	0E	CAP, E 100-10
C115	87-010-197-080	0E	C-CAP, S 0.01-25 B
C116	87-010-197-080	0E	C-CAP, S 0.01-25 B
C117	87-010-322-080	0E	C-CAP, S 100P-50 CH
C118	87-010-263-080	0E	CAP, E 100-10〈D〉
C119	87-010-197-080	0E	C-CAP, S 0.01-25 B〈D〉
C120	87-010-314-080	0E	C-CAP, S 22P-50 CH
C121	87-010-314-080	0E	C-CAP, S 22P-50 CH
C122	87-010-318-080	0E	C-CAP, S 47P-50 CH〈D〉
C123	87-010-197-080	0E	C-CAP, S 0.01-25 B
C124	87-010-184-080	0E	C-CAP, S 3300P-50 B
C125	87-010-805-080	0E	C-CAP, S 1-16 F
C201	87-010-318-080	0E	C-CAP, S 47P-50 CH
C202	87-010-318-080	0E	C-CAP, S 47P-50 CH
C203	87-010-321-080	0E	C-CAP, S 82P-50 CH
C204	87-010-321-080	0E	C-CAP, S 82P-50 CH
C205	87-010-321-080	0E	C-CAP, S 82P-50 CH
C206	87-010-321-080	0E	C-CAP, S 82P-50 CH
C207	87-012-153-080	0E	C-CAP, S 120P-50 CH
C208	87-012-153-080	0E	C-CAP, S 120P-50 CH
C209	87-012-153-080	0E	C-CAP, S 120P-50 CH
C210	87-012-153-080	0E	C-CAP, S 120P-50 CH
C211	87-010-403-080	0E	CAP, E 3.3-50 SME
C212	87-010-403-080	0E	CAP, E 3.3-50 SME
C213	87-010-186-080	0E	C-CAP, S 4700P-50 B
C214	87-010-186-080	0E	C-CAP, S 4700P-50 B
C231	87-010-221-080	0E	CAP, E 470-10
C232	87-010-263-080	0E	CAP, E 100-10
C301	87-010-196-080	0E	C-CAP, S 0.1-25 F
C302	87-010-404-040	0E	CAP, E 4.7-50 SME
C303	87-010-248-040	0E	CAP, E 220-10 SME
C304	87-010-196-080	0E	C-CAP, S 0.1-25 F
C305	87-010-196-080	0E	C-CAP, S 0.1-25 F
C306	87-016-459-040	0E	CAP, E 470-10 SMG
C501	87-016-459-040	0E	CAP, E 470-10 SMG
C502	87-010-197-080	0E	C-CAP, S 0.01-25 B
C503	87-010-374-040	0E	CAP, E 47-10
C504	87-010-197-080	0E	C-CAP, S 0.01-25 B
C505	87-010-196-080	0E	C-CAP, S 0.1-25 F
C506	87-010-196-080	0E	C-CAP, S 0.1-25 F
C507	87-010-196-080	0E	C-CAP, S 0.1-25 F
C508	87-010-196-080	0E	C-CAP, S 0.1-25 F
C509	87-010-197-080	0E	C-CAP, S 0.01-25 B
C601	87-010-197-080	0E	C-CAP, S 0.01-25 B
C602	87-010-381-080	0E	CAP, E 330-16 SME
C603	87-010-196-080	0E	C-CAP, S 0.1-25 F
C702	87-010-322-080	0E	C-CAP, S 100P-50 CH
C703	87-010-322-080	0E	C-CAP, S 100P-50 CH
C704	87-010-318-080	0E	C-CAP, S 47P-50 CH
C707	87-010-178-080	0E	C-CAP, S 1000P-50 B
C801	87-010-197-080	0E	C-CAP, S 0.01-25 B〈G〉
C802	87-010-374-040	0E	CAP, E 47-10〈G〉
C803	87-010-194-080	0E	C-CAP, S 0.047-25 F〈G〉
C804	87-010-374-080	0E	CAP, E 47-10〈G〉
C805	87-010-197-080	0E	C-CAP, S 0.01-25 B〈G〉
C806	87-010-374-080	0E	CAP, E 47-10〈G〉
C807	87-010-405-080	0E	CAP, E 10-50 SME〈G〉
C808	87-010-197-080	0E	C-CAP, S 0.01-25 B〈G〉
C809	87-010-405-080	0E	CAP, E 10-50 SME〈G〉
C810	87-010-313-080	0E	C-CAP, S 18P-50 CH〈G〉
C811	87-010-314-080	0E	C-CAP, S 22P-50 CH〈G〉
C812	87-010-313-080	0E	C-CAP, S 18P-50 CH〈G〉
C813	87-010-315-080	0E	C-CAP, S 27P-50 CH〈G〉
C814	87-010-197-080	0E	C-CAP, S 0.01-25 B〈G〉
C815	87-010-374-080	0E	CAP, E 47-10〈G〉
C816	87-010-404-080	0E	CAP, E 4.7-50 SME〈G〉
C817	87-010-221-080	0E	CAP, E 470-10〈G〉
C818	87-010-196-080	0E	C-CAP, S 0.1-25 F〈G〉
C819	87-010-321-080	0E	C-CAP, S 82P-50 CH〈G〉
C820	87-010-178-080	0E	C-CAP, S 1000P-50 B〈G〉
C901	87-010-551-040	0E	C-CAP, E 33-10 5L
EMI801	87-008-474-080	0E	F-BEAD, EMI BL02RN1〈G〉
EMI802	87-008-474-080	0E	F-BEAD, EMI BL02RN1〈G〉
FT001	84-ZG1-614-110	1A	CABLE FFC 5P-1.25

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
FT002	84-ZG1-617-010	0E	F-CABLE, 4-2.0-110〈G〉
J801	87-009-502-010	1A	JACK, PIN 1P Y EARTH〈G〉
L2	87-003-295-080	0E	COIL, 10UH
M601	87-045-305-019	1F	MOTOR, RF-500TB
SFR1	87-024-176-080	0E	SFR, 100K DIA6 V
SFR2	87-024-171-080	0E	SFR 4.7K DIA6 V
SW401	87-036-109-010	1A	SW, PUSH SPPB 61
SW402	87-036-109-010	1A	SW, PUSH SPPB 61
X101	87-030-270-080	1C	VIB, XTAL 16.9344MHZ
X801	80-JUC-602-080	1E	VIB, XTAL 17.73MHZ〈G〉
X802	80-JUC-601-080	1E	VIB, XTAL 14.31MHZ〈G〉

LED C.B

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
LED701	87-017-350-080	0E	LED, SEL1550CM〈FJ〉
LED701	87-017-806-010	0E	LED, SEL1810DM〈F〉
LED702	87-017-733-080	0E	LED, SEL1250SM〈FJ〉
LED702	87-017-350-080	0E	LED, SEL1550CM〈F〉
LED703	87-017-733-080	0E	LED, SEL1250SM〈FJ〉
LED703	87-017-350-080	0E	LED, SEL1550CM〈F〉
LED704	87-017-350-080	0E	LED, SEL1550CM〈FJ〉
LED704	87-017-806-010	0E	LED, SEL1810DM〈F〉

T-T C.B

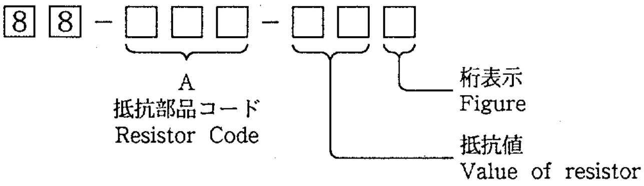
REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C401	87-018-214-080	0E	CAP TC U 0.1-50 F
M401	87-045-364-019	1F	MOTER, (BCH3B14)
PS401	87-026-573-010	1C	P-SNSR, GP1S53V

MOTOR C.B

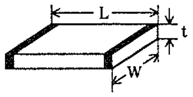
REF. NO	PART NO.	カンリ NO.	DESCRIPTION
PIN105	91-564-722-110	1C	CONNECTOR 6P
M20	9X-262-513-210	2M	SLED MOTOR ASSY
SW1	91-572-085-110	1B	LEAF SW

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

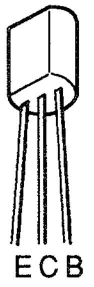
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



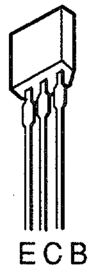
チップ抵抗
Chip resistor

Wattage 容量	Type 種類	Tolerance 許容誤差	Symbol 記号	Dimensions／寸法 (mm)				Resistor Code : A 抵抗コード : A
				Form/外形	L	W	t	
1/32W	1608	±5%	CJ		1.6	0.8	0.35	108
1/10W	2125	±5%	CJ		2	1.25	1.45	118
1/8W	3126	±5%	CJ		3.2	1.6	0.5 ~0.7	128

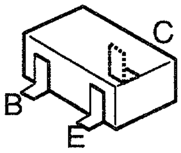
TRANSISTOR ILLUSTRATION



2SA952
2SC2001
2SD655

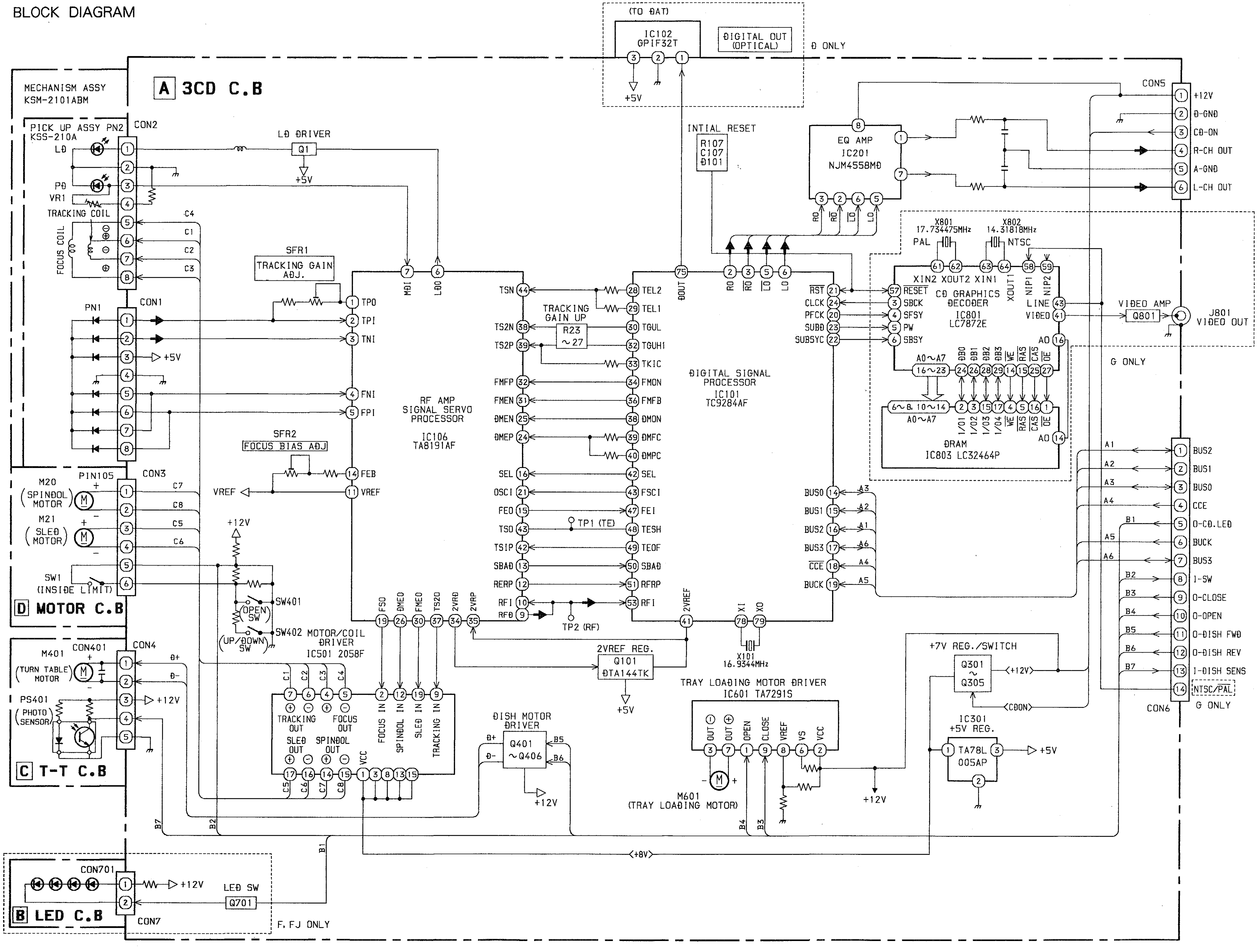


2SA933S



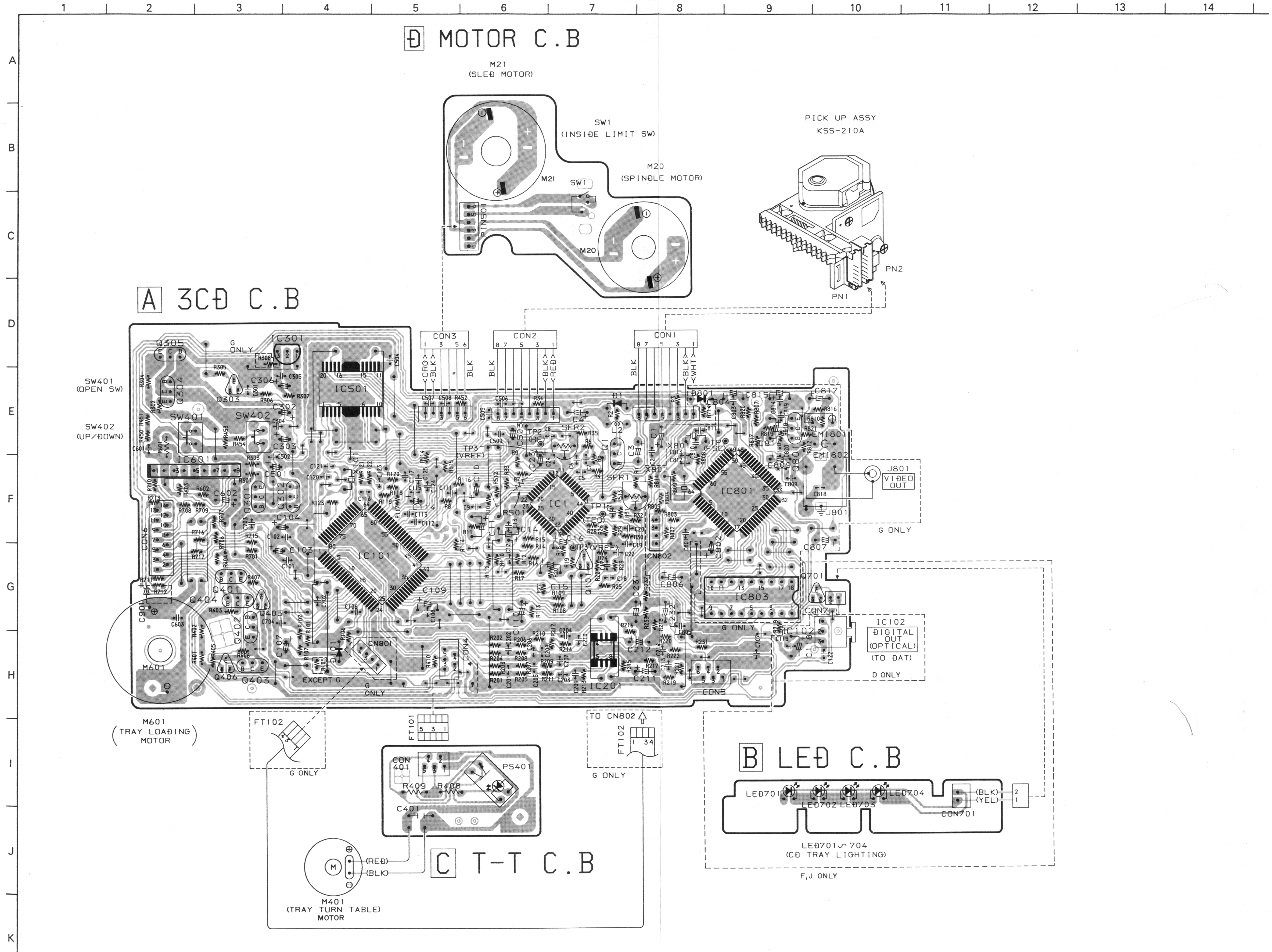
2SC2712
DTA114TK
DTC143TK
DTC123JK

BLOCK DIAGRAM

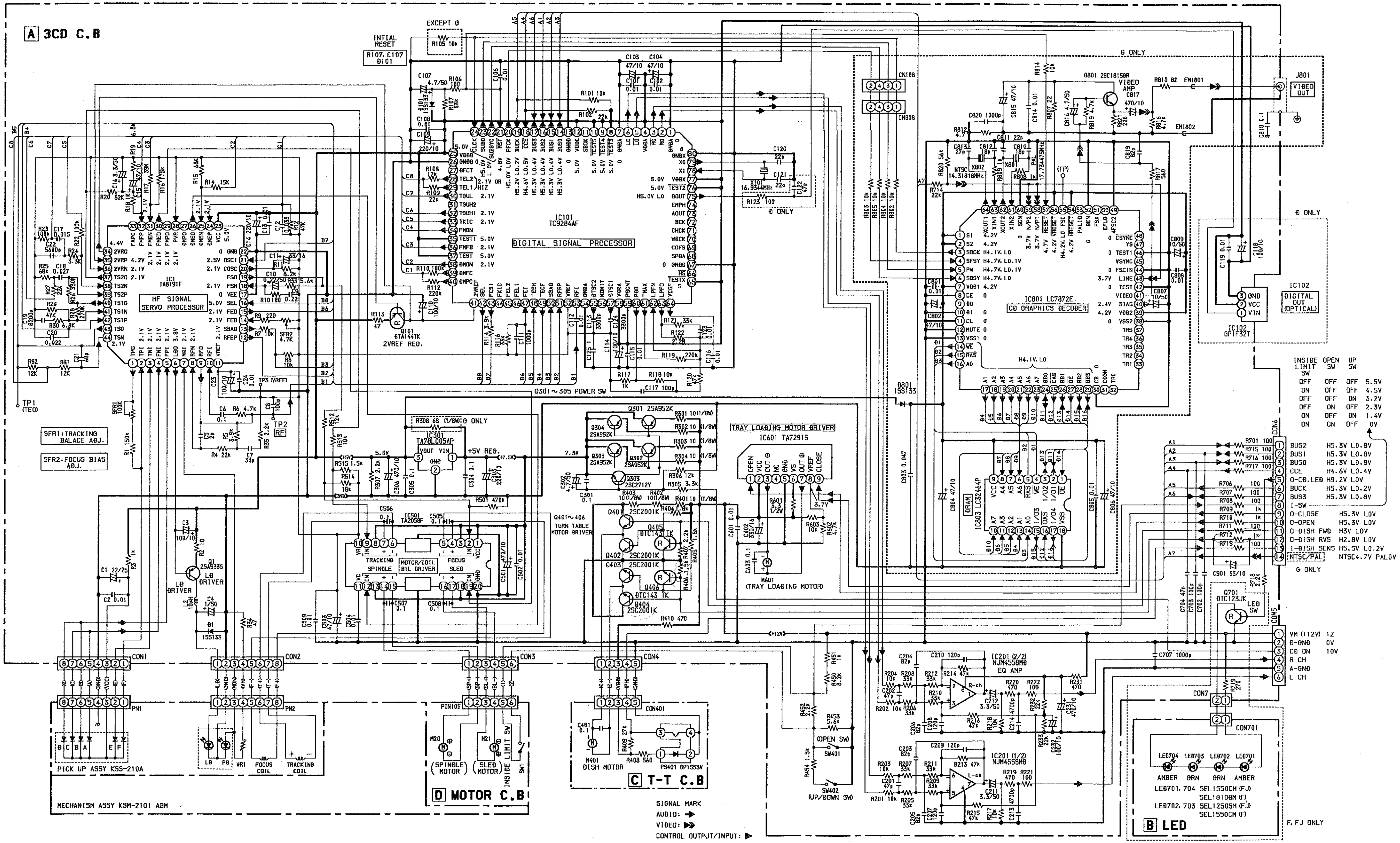


(TO DAT)
IC102 GPIF32T
DIGITAL OUT (OPTICAL)
D ONLY
+5V
A 3CD C.B
MECHANISM ASSY KSM-2101ABM
PICK UP ASSY PN2 KSS-210A
CON2
LD
PD
VR1
TRACKING COIL
FOCUS COIL
LD DRIVER
Q1
+5V
C4
C1
C2
C3
PN1
CON1
SFR1
TRACKING GAIN ADJ.
INTIAL RESET
R107 C107 D101
EQ AMP
IC201
NJM4558MD
CON5
+12V
D-GND
CD-ON
R-CH OUT
A-GND
L-CH OUT
RO
RO
LO
LO
X801 17.734475MHz
PAL
X802 14.31818MHz
NTSC
XIN2 XOUT2 XIN1
XOUT1
NIP1
NIP2
RST
CLCK
PFCK
SUBD
SUBSYC
RESET
SBCK
SFSY
PW
SBSY
CD GRAPHICS DECODER
IC801
LC7872E
LINE
VIDEO
VIDEO AMP
Q801
J801 VIDEO OUT
G ONLY
A0~A7
16~23
DB0
DB1
DB2
DB3
WE
RAS
CAS
OE
A0
6~8, 10~14
I/O1
I/O2
I/O3
I/O4
DRAM
IC803 LC32464P
MDI
LDO
TPO
TPI
TNI
FNI
FPI
FEB
VREF
RF AMP
SIGNAL SERVO
PROCESSOR
IC106
TA8191AF
TSN
TS2N
TS2P
FMFP
FMEN
DMEN
DMEP
SEL
OSCI
FEO
TSO
TSIP
SBAD
RERP
RFI
RFD
TRACKING GAIN UP
R23 ~27
TEL2
TEL1
TGUL
TGUH1
TKIC
FMON
FMFB
DMON
DMFC
DMPC
SEL
FSCI
FEI
TESH
TEOF
SBAD
RFRP
RFI
TP1 (TE)
TP2 (RF)
DOUT
DIGITAL SIGNAL PROCESSOR
IC101
TC9284AF
BUS0
BUS1
BUS2
BUS3
CCE
BUCK
A1
A2
A3
A4
A5
A6
B1
B2
B3
B4
B5
B6
B7
2VREF
XI
XO
X101 16.9344MHz
2VREF REG.
Q101
DTA144TK
+5V
BUS2
BUS1
BUS0
CCE
O-CD.LED
BUCK
BUS3
I-SW
O-CLOSE
O-OPEN
O-DISH FWD
O-DISH REV
I-DISH SENS
NTSC/PAL
CON6
G ONLY
M20
PIN105
CON3
SPINDOL MOTOR
M21
SLED MOTOR
SW1 (INSIDE LIMIT)
D MOTOR C.B
C7
C8
C5
C6
VREF
SFR2
FOCUS BIAS ADJ
+12V
SW401
OPEN SW
SW402
UP/DOWN SW
MOTOR/COIL DRIVER
IC501 2058F
FSO
DMEO
FMEO
TS2O
2VRD
2VRP
C1
C2
C3
C4
TRACKING OUT
FOCUS OUT
SLED OUT
SPINDOL OUT
VCC
FOCUS IN
SPINDOL IN
SLED IN
TRACKING IN
C5
C6
C7
C8
M401
CON401
CON4
TURN TABLE MOTOR
PS401
PHOTO SENSOR
D+
D-
+12V
C T-T C.B
DISH MOTOR DRIVER
Q401 ~Q406
+12V
+7V REG./SWITCH
Q301 ~ Q305
(+12V)
(CDON)
TRAY LOADING MOTOR DRIVER
IC601 TA7291S
OUT
OUT
OPEN
CLOSE
VREF
VS
VCC
M601
(TRAY LOADING MOTOR)
+12V
IC301 +5V REG.
TA78L 005AP
+5V
(+8V)
CON701
+12V
LED SW
Q701
B LED C.B
CON7
F, FJ ONLY

WIRING – 1


D MOTOR C.B
M21 (SLED MOTOR)
SW1 (INSIDE LIMIT SW)
M20 (SPINDLE MOTOR)
PICK UP ASSY KSS-210A
PN1
PN2
A 3CD C.B
CON3
CON2
CON1
IC501
IC101
IC1
IC801
IC803
IC201
IC301
IC601
CON6
SW401 (OPEN SW)
SW402 (UP/DOWN)
M601 (TRAY LOADING MOTOR)
J801 VIDEO OUT
G ONLY
IC102 DIGITAL OUT (OPTICAL) (TO DAT)
D ONLY
CN801
CON4
CON5
CON7
EXCEPT G
FT102
FT101
TO CN802
B LED C.B
LED701
LED702
LED703
LED704
CON701
LED701∽704 (CD TRAY LIGHTING)
F,J ONLY
C T-T C.B
CON 401
PS401
R409
R408
C401
M401 (TRAY TURN TABLE) MOTOR
(RED)
(BLK)
(YEL)

SCHEMATIC DIAGRAM – 1


A 3CD C.B
INITIAL RESET
R107, C107 D101
EXCEPT G
R105 10k
IC101 TC9284AF
DIGITAL SIGNAL PROCESSOR
IC1 TA8191F
RF SIGNAL SERVO PROCESSOR
Q101 DTA144TK 2VREF REG.
X101 16.9344MHz
G ONLY
CN108
CN808
IC801 LC7872E
CD GRAPHICS DECODER
X802 NTSC 14.31818MHz
X801 PAL 17.734475MHz
Q801 2SC1815GR VIDEO AMP
EM1801
EM1802
J801 VIDEO OUT
IC102 GP1F32T
DIGITAL OUT (OPTICAL)
GND VCC VIN
IC803 LC3264P
DRAM
D801 1SS133
Q301~305 POWER SW
IC301 TA78L005AP
+5V REG.
Q301 2SA952K
Q302 2SA952K
Q303 2SC2712Y
Q304 2SA952K
Q305 2SA952K
TRAY LOADING MOTOR DRIVER
IC601 TA7291S
M601 (TRAY LOADING MOTOR)
Q401~406 TURN TABLE MOTOR DRIVER
Q401 2SC2001K
Q402 2SC2001K
Q403 2SC2001K
Q404 2SC2001K
Q405 DTC143TK
Q406 DTC143TK
IC501 TA2058F
TRACKING SPINDLE
MOTOR/COIL BTL DRIVER
FOCUS SLED
Q1 2SA933S LD DRIVER
SFR1: TRACKING BALACE ADJ.
SFR2: FOCUS BIAS ADJ.
TP1 (FE)
TP2 (RF)
TP3 (VREF)
CON1 CON2 CON3 CON4 CON5 CON6 CON7
PN1 PN2 PIN105
PICK UP ASSY KSS-210A
LD PD VR1 FOCUS COIL TRACKING COIL
MECHANISM ASSY KSM-2101 ABM
M20 (SPINDLE MOTOR)
M21 (SLED MOTOR)
SW1 INSIDE LIMIT SW
D MOTOR C.B
CON401
M401 DISH MOTOR
PS401 OPI553V
C T-T C.B
SW401 (OPEN SW)
SW402 (UP/DOWN SW)
IC201 (2/2) NJM4558MD EQ AMP
IC201 (1/2) NJM4558MD
Q701 DTC123JK LED SW
CON701
LE8704 AMBER
LE8703 GRN
LE8702 GRN
LE8701 AMBER
LE8701, 704 SEL1550CM (F,J) SEL1810BM (F)
LE8702, 703 SEL1250SM (F,J) SEL1550CM (F)
B LED
F, FJ ONLY
INSIDE LIMIT SW / OPEN SW / UP SW
OFF OFF OFF 5.5V
ON OFF OFF 4.5V
OFF OFF ON 3.2V
OFF ON OFF 2.3V
ON OFF ON 1.4V
ON ON OFF 0V
BUS2 H5.3V L0.8V
BUS1 H5.3V L0.8V
BUS0 H5.3V L0.8V
CCE H4.6V L0.4V
D-CD.LED H9.2V L0V
BUCK H5.3V L0.2V
BUS3 H5.3V L0.8V
I-SW
D-CLOSE H5.3V L0V
D-OPEN H5.3V L0V
D-DISH FWD H3V L0V
D-DISH RVS H2.8V L0V
I-DISH SENS H5.3V L0.2V
NTSC/PAL NTSC4.7V PAL0V
G ONLY
VM (+12V) 12
D-GND 0V
CD ON 10V
R CH
A-GND
L CH
SIGNAL MARK
AUDIO: ➔
VIDEO: ▶▶
CONTROL OUTPUT/INPUT: ▶

IC DESCRIPTION

IC, TC9284F

端子番号	端子名称	I/O	機能説明
1	GNDA	—	DA変換部Rチャンネル用アナロググランド端子。
2	RO	O	Rチャンネルデータ正転出力端子。
3	$\overline{\text{RO}}$	O	Rチャンネルデータ反転出力端子。
4	VDA	—	DA変換部電源端子。(＋5V)
5	$\overline{\text{LO}}$	O	Lチャンネルデータ反転出力端子。
6	LO	O	Lチャンネルデータ正転出力端子。
7	GNDA	—	DA変換部Lチャンネル用アナロググランド端子。
8～10	$\overline{\text{TEST3}}$～$\overline{\text{TEST5}}$	I	テスト端子。通常“H”。(＋5V)
11	SBOK	O	サブコードQデータのCRCC判定結果出力端子。判定結果OKの時“H”。(未使用)
12	VDDD	—	デジタル電源電圧端子。(＋5V)
13	GNDD	—	デジタルグランド端子。
14～17	BUS0～BUS3	I/O	マイコンインターフェース用データ入出力端子。
18	$\overline{\text{CCE}}$	I	マイコンインターフェース用チップイネーブル信号入力端子。 “L”の時、BUS3～0がアクティブ。
19	BUCK	I	マイコンインターフェース用クロック入力端子。
20	PFCK	O	再生系フレームシンク信号出力端子。
21	$\overline{\text{RST}}$	I	リセット信号入力端子。リセット時“L”。
22	SUBSYC	O	サブコードブロックシンク出力端子。サブコードシンクが検出された時、S1の位置で“H”。
23	SUBD	O	サブコードP～W出力端子。
24	CLCK	I	サブコードP～Wデータ読み出しクロック入力端子。
25	VDDD	—	デジタル電源電圧端子。(+5V)
26	GNDD	—	デジタルグランド端子。
27	DFCT	O	ディフェクト検出信号出力端子。ディフェクト検出時“VREF”、通常は“HiZ”
28	TEL2	O	トラッキングゲイン調整用アナログスイッチ出力端子。“VREF”、または“HiZ”
29	TEL1	O	
30	TGUL	O	トラッキングサーボゲインアップ用アナログスイッチ出力端子。ゲインアップ時と通常再生時の極性はコマンドにより選択可能。
31	TGUH2	O	トラッキングサーボゲインアップ用アナログスイッチ出力端子。ゲインアップ時“HiZ”、通常は“VREF”。通常再生時はTGUH1、TGUH2は未使用。
32	TUGH1	O	
33	TKIC	O	トラッキングアクチュエータキック信号出力端子。NKICX、CKICX、トラッキングゲイン調整時のキック用として使用。“2VREF”で外周、“O”で内周方向へキック。通常は“HiZ”。
34	FMON	O	フィードサーボオン/オフ用アナログスイッチ出力端子。 サーボオン時“HiZ”、オフ時“VREF”。
35	$\overline{\text{TEST1}}$	I	テスト端子。通常“H”。(+5Vに接続)
36	FMFB	O	フィードモータFWD/BWD送り用コントロール信号出力端子。“2VREF”で外周、“O”で内周方向へフィード。通常は“HiZ”。
37	$\overline{\text{TEST}}$	I	テスト端子。通常“H”またはオープン。(+5Vに接続)
38	DMON	O	ディスクモータ駆動回路のゲイン切り替え用アナログスイッチ出力端子。CLVサーボオフ時“HiZ”、オン時はコマンドにより、“HiZ/VREF”を選択可能。

<table>
<tr><th>端子番号</th><th>端子名称</th><th>I/O</th><th>機　能　説　明</th></tr>
<tr><td>39</td><td>DMFC</td><td>O</td><td>ディスクモータCLVサーボ用AFC信号出力端子。<table>
<tr><th>動作内容</th><th>コマンド</th><th>DMFC出力</th></tr>
<tr><td>モータ加速時</td><td>DMFK</td><td>“2VREF”</td></tr>
<tr><td>CLVサーボオン時</td><td>DMSV</td><td>AFC信号 (PWM)</td></tr>
<tr><td>モータブレーキ時</td><td>DMBK</td><td>“L”</td></tr>
<tr><td>CLVサーボオフ時</td><td>DMOFF</td><td>“VREF”</td></tr>
</table></td></tr>
<tr><td>40</td><td>DMPC</td><td>O</td><td>ディスクモータCLVサーボ用APC信号出力端子。</td></tr>
<tr><td>41</td><td>2VREF</td><td>—</td><td>アナログ基準電源端子。(“VREF” 電圧の2倍)。</td></tr>
<tr><td>42</td><td>SEL</td><td>O</td><td>サーボモード指示信号出力端子。レーザーダイオード (LD) のオン/オフ、フォーカスサーボのオン/オフをコントロール。<table>
<tr><th>SEL出力</th><th>LD</th><th>フォーカスサーボ</th><th>動作モード</th></tr>
<tr><td>“L”</td><td>オフ</td><td>オフ</td><td>LDオフ</td></tr>
<tr><td>“HiZ”</td><td>オン</td><td>オフ</td><td>フォーカスサーチ</td></tr>
<tr><td>“H”</td><td>オン</td><td>オン</td><td>フォーカスオン
(ノーマルプレイ、etc)</td></tr>
</table></td></tr>
<tr><td>43</td><td>FCSI</td><td>O</td><td>フォーカスサーチモード時のフォーカスアクチュエータ駆動信号出力端子。“VDDA” でレンズがディスクから遠ざかる方向に駆動、“L” で近づく方向に駆動。通常は “HiZ”。</td></tr>
<tr><td>44</td><td>FKIC</td><td>O</td><td>フォーカスゲイン調整モード時のフォーカスアクチュエータ駆動信号出力端子。“VDDA” でレンズがディスクから遠ざかる方向に駆動、“L” で近づく方向に駆動。通常は “HiZ”。(未使用)</td></tr>
<tr><td>45</td><td>FEL1</td><td>O</td><td rowspan="2">フォーカスゲイン調整用アナログスイッチ出力端子。“VREF” または “HiZ”。(未使用)</td></tr>
<tr><td>46</td><td>FEL2</td><td>O</td></tr>
<tr><td>47</td><td>FEI</td><td>I</td><td>フォーカスエラー信号入力端子。</td></tr>
<tr><td>48</td><td>TESH</td><td>I</td><td>トラッキングエラー信号サンプルホールド用アナログスイッチ入力端子。</td></tr>
<tr><td>49</td><td>TEOF</td><td>O</td><td>トラッキングサーボ動作オン/オフ用アナログスイッチ出力端子。
トラッキングサーボオフ時 “VREF”。</td></tr>
<tr><td>50</td><td>SBAD</td><td>I</td><td>サブビーム加算信号入力端子。</td></tr>
<tr><td>51</td><td>RFRP</td><td>I</td><td>RFリップル信号入力端子。</td></tr>
<tr><td>52</td><td>VREF</td><td>—</td><td>アナログ基準電源端子。</td></tr>
<tr><td>53</td><td>RFI</td><td>I</td><td>RF信号入力端子。</td></tr>
<tr><td>54</td><td>GNDA</td><td>—</td><td>アナロググランド端子。</td></tr>
<tr><td>55</td><td>DTSC 2</td><td>O</td><td>データスライスコントロール用EFM信号反転出力端子。</td></tr>
<tr><td>56</td><td>MONI T</td><td>O</td><td>内部信号モニタ用出力端子。コマンドによりEFMO、PLCK、LOCK信号を選択可能。ミュートも可能。(未使用)</td></tr>
<tr><td>57</td><td>DTSC 1</td><td>O</td><td>データスライスコントロール用EFM信号正転出力端子。</td></tr>
<tr><td>58</td><td>VDDA</td><td>—</td><td>アナログ電源端子。(+5V)</td></tr>
<tr><td>59</td><td>PDCNT</td><td>I</td><td>PDO出力コントロール端子。“L” でPDO端子を強制的に “HiZ” に固定。
“H” で通常出力。(+5Vに接続)</td></tr>
<tr><td>60</td><td>PDO</td><td>O</td><td>EFM信号とPLCK信号との位相誤差信号出力端子。</td></tr>
</table>

<table>
<tr><th>端子番号</th><th>端子名称</th><th>I/O</th><th colspan="3">機能説明</th></tr>
<tr><td rowspan="5">61</td><td rowspan="5">TMAX</td><td rowspan="5">O</td><td colspan="3">TMAX検出結果出力端子。</td></tr>
<tr><td>TMAX検出結果</td><td>TMAX出力</td><td rowspan="4"></td></tr>
<tr><td>所定周期より長い</td><td>“L”</td></tr>
<tr><td>所定周期より短い</td><td>“2VREF”</td></tr>
<tr><td>所定周期内</td><td>“HiZ”</td></tr>
<tr><td>62</td><td>LPFN</td><td>I</td><td colspan="3">ローパスフィルタ用アンプ反転入力端子。</td></tr>
<tr><td>63</td><td>LPFO</td><td>O</td><td colspan="3">ローパスフィルタ用アンプ出力端子。</td></tr>
<tr><td>64</td><td>VCOF</td><td>O</td><td colspan="3">VCO用フィルタ端子。</td></tr>
<tr><td>65</td><td>TESTX</td><td>I</td><td colspan="3">テスト端子。通常“H”または“L”。(+5Vに接続)</td></tr>
<tr><td>66</td><td>$\overline{\text{HS}}$</td><td>O</td><td colspan="3">倍速モード出力端子。通常再生の時“H”、倍速再生の時“L”を出力する。(未使用)</td></tr>
<tr><td>67</td><td>GNDD</td><td>—</td><td colspan="3">デジタルグランド端子。(未使用)</td></tr>
<tr><td>68</td><td>SPDA</td><td>O</td><td colspan="3">プロセッサステータス信号出力端子。(未使用)</td></tr>
<tr><td>69</td><td>COFS</td><td>O</td><td colspan="3">訂正系フレームクロック (7.35kHz) 出力端子。(未使用)</td></tr>
<tr><td>70</td><td>WDCK</td><td>O</td><td colspan="3">ワードクロック (88.2kHz) 出力端子。マイコンコマンドによりSUBQ、BUFOV、IPF信号を選択可能。(未使用)</td></tr>
<tr><td>71</td><td>CHCK</td><td>O</td><td colspan="3">チャンネルクロック (44.1kHz) 出力端子。
Lチャンネルの時“L”、Rチャンネルの時“H”。(未使用)</td></tr>
<tr><td>72</td><td>BCK</td><td>O</td><td colspan="3">ビットクロック (1.4112MHz) 出力端子。(未使用)</td></tr>
<tr><td>73</td><td>AOUT</td><td>O</td><td colspan="3">オーディオデータ出力端子。(未使用)</td></tr>
<tr><td>74</td><td>EMPH</td><td>O</td><td colspan="3">エンファシスオン/オフ指示信号出力端子。
エンファシスオンの時“H”、オフの時“L”。(未使用)</td></tr>
<tr><td>75</td><td>DOUT</td><td>O</td><td colspan="3">デジタルアウト出力端子。</td></tr>
<tr><td>76</td><td>$\overline{\text{TEST2}}$</td><td>I</td><td colspan="3">テスト端子。通常“H”。(+5Vに接続)</td></tr>
<tr><td>77</td><td>VDDX</td><td>—</td><td colspan="3">水晶発振部電源端子。(+5V)</td></tr>
<tr><td>78</td><td>XI</td><td>I</td><td colspan="3" rowspan="2">水晶発振子接続端子。(水晶発振周波数16.9344MHz)</td></tr>
<tr><td>79</td><td>XO</td><td>O</td></tr>
<tr><td>80</td><td>GNDX</td><td>—</td><td colspan="3">水晶発振部グランド端子。</td></tr>
</table>

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端子番号	端子名称	I/O	機能説明
1	TPO	O	サブビームI-Vアンプ (TP AMP) 出力端子。
2	TPI	I	サブビームI-Vアンプ (TP AMP) 入力端子。
3	TNI	I	サブビームI-Vアンプ (TN AMP) 入力端子。
4	FNI	I	メインビームI-Vアンプ (FN AMP) 入力端子。
5	FPI	I	メインビームI-Vアンプ (FP AMP) 入力端子。
6	LDO	O	レーザーダイオードアンプ (LD AMP) 出力端子。
7	MDI	I	モニタフォトダイオードアンプ (MD AMP) 入力端子。
8	RFN	I	RFアンプ (RF AMP) 逆相入力端子。
9	RFO	O	RFアンプ (RF AMP) 出力端子。

端子番号	端子名称	I/O	機　能　説　明
10	RFI	I	RFリップル信号生成回路入力端子。
11	VREF	O	基準電圧出力端子。(+2.1V)
12	RFRP	O	RFリップル信号出力端子。
13	SBAD	O	キズ検出信号出力端子。
14	FEB	I	フォーカスエラーバランス調整入力端子。
15	FEO	O	フォーカスエラーアンプ (FE AMP) 出力端子。
16	SEL	I	アナログスイッチコントロール信号入力端子。
17	VEE	—	グランド端子。
18	FSN	I	フォーカス出力アンプ (FS AMP) 逆相入力端子。
19	FSO	O	フォーカス出力アンプ (FS AMP) 出力端子。
20	COSC	O	フォーカスサーチ信号生成用コンデンサ接続端子。
21	OSCI	I	フォーカスサーチ信号生成用内臓電流源コントロール入力端子。
22	GND	—	グランド端子。
23	VCC	—	電源端子。(+5V)
24	DMEP	I	ディスクモータアンプ (DM AMP) 正相入力端子。
25	DMEN	I	ディスクモータアンプ (DM AMP) 逆相入力端子。
26	DMEO	O	ディスクモータアンプ (DM AMP) 出力端子。
27	DMPO	O	ディスクモータ駆動アンプ (DMP AMP) 出力端子。
28	PVR	I	駆動アンプ基準電圧入力端子。
29	FMPO	O	フィードモータ駆動アンプ (FMP AMP) 出力端子。
30	FMEO	O	フィードモータアンプ (FM AMP) 出力端子。
31	FMEN	I	フィードモータアンプ (FM AMP) 逆相入力端子。
32	FMEP	I	フィードモータアンプ (FM AMP) 正相入力端子。
33	FAPO	O	フォーカスアクチュエータ駆動アンプ (FAP AMP) 出力端子。(未使用)
34	2VRO	O	2VREFアンプ (2VREF AMP) 出力端子。
35	2VRP	I	2VREFアンプ (2VREF AMP) 正相入力端子。
36	2VRN	I	2VREFアンプ (2VREF AMP) 逆相入力端子。
37	TS2O	O	トラッキングサーボアンプ2 (TS2 AMP) 出力端子。
38	TS2N	I	トラッキングサーボアンプ2 (TS2 AMP) 逆相入力端子。
39	TS2P	I	トラッキングサーボアンプ2 (TS2 AMP) 正相入力端子。
40	TS1O	O	トラッキングサーボアンプ1 (TS1 AMP) 出力端子。
41	TS1N	I	トラッキングサーボアンプ1 (TS1 AMP) 逆相入力端子。
42	TS1P	I	トラッキングサーボアンプ1 (TS1 AMP) 正相入力端子。
43	TSO	O	トラッキング出力アンプ (TS AMP) 出力端子。
44	TSN	I	トラッキング出力アンプ (TS AMP) 逆相入力端子。

IC DESCRIPTION

IC, TC9284F

Pin No.	Pin Name	I/O	Description
1	GNDA	—	D/A converter R-channel analog GND
2	RO	O	R-channel data positive output
3	$\overline{RO}$	O	R-channel data inverted output
4	VDA	—	D/A converter power supply (+5 V)
5	$\overline{LO}$	O	L-channel data inverted output
6	LO	O	L-channel data positive output
7	GNDA	—	D/A converter L-channel analog GND
8~10	$\overline{TEST3}$~$\overline{TEST5}$	I	TEST pin. Normally "H" (+5 V)
11	SBOK	O	Sub code data CRCC judgment result output. Judgment result OK: H (Not used)
12	VDDD	—	Digital power supply (+5 V)
13	GNDD	—	Digital GND
14~17	BUS0~BUS3	I/O	μprocessor interface, data input/output
18	CCE	I	μprocessor interface, chip enable signal input. When "L" : BUS 3~0 are active
19	BUCK	I	μprocessor interface, clock input
20	PFCK	O	PB frame sync output
21	$\overline{RST}$	I	Reset signal input. "L" at reset
22	SUBSYC	O	Sub code block sync output. When sub code is detected, "H" at S1 position
23	SUBD	O	Sub code P~W output
24	CLCK	I	Sub code P~W data read clock input
25	VDDD	—	Digital power supply (+5 V)
26	GNDD	—	Digital GND
27	DFCT	O	Defect detection signal output. When defect is detected: "VREF" , or "HiZ"
28	TEL2	O	Tracking gain adjustment analog switch output. "VREF" , or "HiZ"
29	TEL1	O	Tracking gain adjustment analog switch output. "VREF" , or "HiZ"
30	TGUL	O	Analog switch output for tracking servo gain up. Polarity in gain-up mode and normal mode can be selected by command
31	TGUH2	O	Analog switch output for tracking servo gain up. "HiZ" for gain-up, normally "VREF" . TGUH1 during normal playback. TGUH2: not used
32	TUGH1	O	
33	TKIC	O	Tracking actuator kick signal output. NKICx and CKICx are used for kick during tracking gain adjustment. "2VREF" for outermost track. "O" for moving toward inner track. Normally "HiZ"
34	FMON	O	Analog switch output to turn ON/OFF the feed servo "HiZ" to turn ON servo. "VREF" to turn OFF servo
35	$\overline{TEST1}$	I	TEST pin. Normally "H" (Connected to +5 V)
36	FMFB	O	Feed motor FWD/BWD direction control signal output. "2VREF" for outmost track. "O" for moving toward inner track. Normally "HiZ"
37	$\overline{TEST}$	I	TEST pin. Normally "H" or open (Connected to +5 V)
38	DMON	O	Analog switch output to select gain of the disc motor drive circuit. "HiZ" for CLV servo OFF, "HiZ" or "VREF" can be selected by command

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>39</td><td>DMFC</td><td>O</td><td>Disc motor CLV servo AFC signal output
<table>
<tr><th>Operation</th><th>Command</th><th>DMFC output</th></tr>
<tr><td>Motor acceleration</td><td>DMFK</td><td>"2VREF"</td></tr>
<tr><td>CLV servo ON</td><td>DMSV</td><td>AFC signal (PWM)</td></tr>
<tr><td>Motor brake</td><td>DMBK</td><td>"L"</td></tr>
<tr><td>CLV servo OFF</td><td>DMOFF</td><td>"VREF"</td></tr>
</table></td></tr>
<tr><td>40</td><td>DMPC</td><td>O</td><td>Disc motor CLV servo APC signal output</td></tr>
<tr><td>41</td><td>2VREF</td><td>—</td><td>Analog power supply (twice the "VREF" voltage)</td></tr>
<tr><td>42</td><td>SEL</td><td>O</td><td>Servo mode select output. It turns ON/OFF the laser diode (LD) and focus servo.
<table>
<tr><th>SEL output</th><th>LD</th><th>Focus servo</th><th>Operating mode</th></tr>
<tr><td>"L"</td><td>OFF</td><td>OFF</td><td>LD OFF</td></tr>
<tr><td>"HiZ"</td><td>ON</td><td>OFF</td><td>Focus search</td></tr>
<tr><td>"H"</td><td>ON</td><td>ON</td><td>Focus ON (normal play)</td></tr>
</table></td></tr>
<tr><td>43</td><td>FCSI</td><td>O</td><td>Focus actuator drive signal output during focus search mode. "VDDA" to move the lens far from disc. "L" to move the lens closer to disc. Normally "HiZ"</td></tr>
<tr><td>44</td><td>FKIC</td><td>O</td><td>Focus actuator drive signal output during focus adjustment mode. "VDDA" to move the lens far from disc. "L" to move the lens closer to disc. Normally "HiZ" (Not used)</td></tr>
<tr><td>45, 46</td><td>FEL1, FEL2</td><td>O</td><td>Focus gain adjustment analog switch output. "VREF" or "HiZ" (Not used)</td></tr>
<tr><td>47</td><td>FEI</td><td>I</td><td>Focus error signal input</td></tr>
<tr><td>48</td><td>TESH</td><td>I</td><td>Analog switch input to track error signal sample-and-hold</td></tr>
<tr><td>49</td><td>TEOF</td><td>O</td><td>Focus gain adjustment analog switch output. "VREF" or "HiZ"</td></tr>
<tr><td>50</td><td>SBAD</td><td>I</td><td>Sub beam added signal input</td></tr>
<tr><td>51</td><td>RFRP</td><td>I</td><td>RF ripple signal input</td></tr>
<tr><td>52</td><td>VREF</td><td>—</td><td>Analog power supply</td></tr>
<tr><td>53</td><td>RFI</td><td>I</td><td>RF signal input</td></tr>
<tr><td>54</td><td>GNDA</td><td>—</td><td>Analog GND</td></tr>
<tr><td>55</td><td>DTSC 2</td><td>O</td><td>Data slice control EFM signal inverted output</td></tr>
<tr><td>56</td><td>MONI T</td><td>O</td><td>Internal signal monitored output. EFMO, PLCK or LOCK signals can be selected by command. Can be muted (Not used)</td></tr>
<tr><td>57</td><td>DTSC 1</td><td>O</td><td>Data slice control EFM signal positive polarity output</td></tr>
<tr><td>58</td><td>VDDA</td><td>—</td><td>Analog power supply (+5 V)</td></tr>
<tr><td>59</td><td>PDCNT</td><td>I</td><td>PDO output control signal input. "L" to fix to "HiZ" forcibly. "H" : normal output (Connected to +5 V)</td></tr>
<tr><td>60</td><td>PDO</td><td>O</td><td>Phase error signal between EFM and PLCK signals is output</td></tr>
<tr><td>61</td><td>TMAX</td><td>O</td><td>TMAX detected result output
<table>
<tr><th>TMAX detected result</th><th>TMAX output</th></tr>
<tr><td>Longer than specified cycle</td><td>"L"</td></tr>
<tr><td>Shorter than specified cycle</td><td>"2VREF"</td></tr>
<tr><td>Within specified cycle</td><td>"HiZ"</td></tr>
</table></td></tr>
</table>

Pin No.	Pin Name	I/O	Description
62	LPFN	I	Low-pass filter amplifier inverted input
63	LPFO	O	Low-pass filter amplifier output
64	VCOF	O	VCO filter output
65	TESTX	I	TEST pin. Normally "H" or "L" (Connected to +5 V)
66	$\overline{\mathrm{HS}}$	O	Double speed mode output. "H" : normal speed. "L" : double speed (Not used)
67	GNDD	—	Digital GND
68	SPDA	O	Processor status signal output (Not used)
69	COFS	O	Correction circuit frame clock (7.35 kHz) output (Not used)
70	WDCK	O	Word clock (88.2 kHz) output. SUBQ, BUF0V or 1PF can be selected by the µprocessor command (Not used)
71	CHCK	O	Channel clock (44.1 kHz) output. "L" for L-channel. "H" for R-channel (Not used)
72	BCK	O	Bit clock (1.4112 MHz) output (Not used)
73	AOUT	O	Audio data output (Not used)
74	EMPH	O	Emphasis ON/OFF select signal. "H" : emphasis ON. "L" for emphasis OFF (Not used)
75	DOUT	O	DIGITAL SIGNAL output
76	$\overline{\mathrm{TEST2}}$	I	TEST pin. Normally "H" (Connected to +5 V)
77	VDDX	—	Crystal oscillator circuit power supply (+5 V)
78	XI	I	External crystal oscillator is connected. (Crystal oscillator frequency 16.9344 MHz)
79	XO	O	External crystal oscillator is connected. (Crystal oscillator frequency 16.9344 MHz)
80	GNDX	—	Crystal oscillator GND

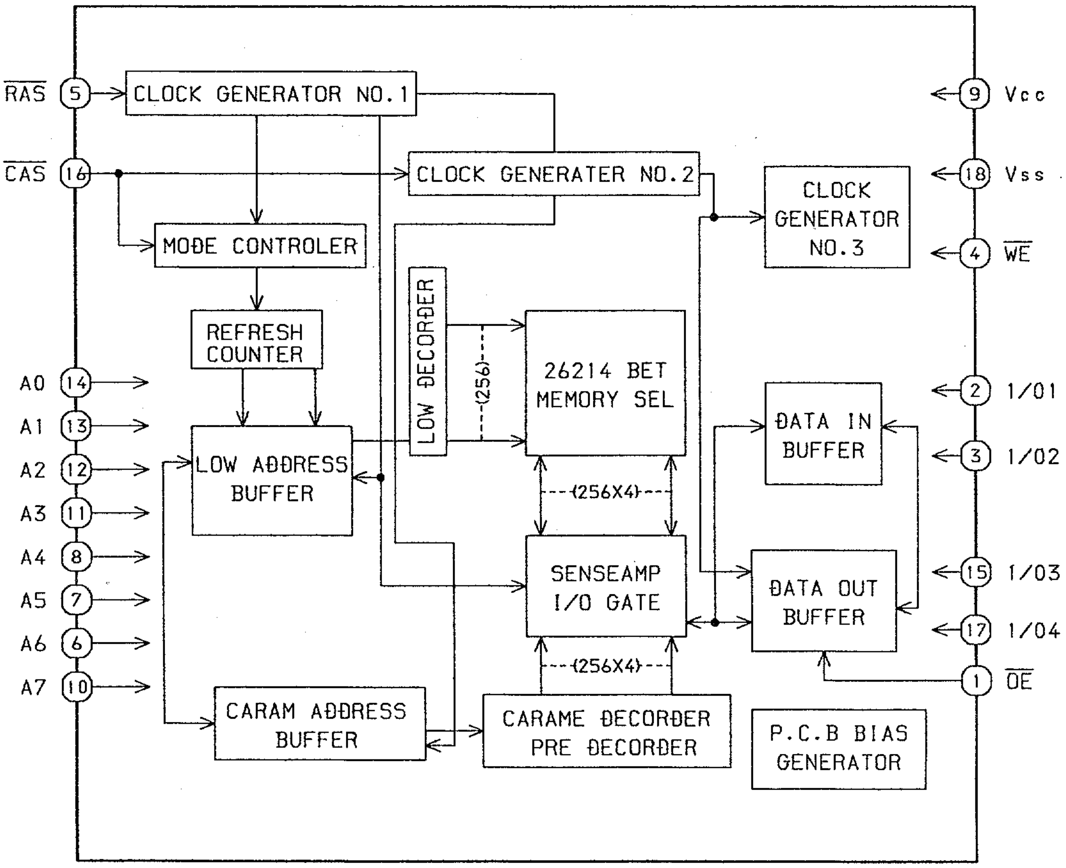
IC, TA8191F

Pin No.	Pin Name	I/O	Description
1	TPO	O	Sub beam I-V amplifier (TP AMP) output
2	TPI	I	Sub beam I-V amplifier (TP AMP) input
3	TNI	I	Sub beam I-V amplifier (TN AMP) input
4	FNI	I	Main beam I-V amplifier (FN AMP) input
5	FPI	I	Main beam I-V amplifier (FP AMP) input
6	LDO	O	Laser diode amp (LD AMP) output
7	MDI	I	Monitor photo diode amp (MD AMP) input
8	RFN	I	RF amp (RF AMP) inverted input
9	RFO	O	RF amp (RF AMP) output
10	RFI	I	Input to RF ripple signal generator
11	VREF	O	Reference voltage output (+2.1 V)
12	RFRP	O	RF ripple signal output
13	SBAD	O	Disc error detected signal output

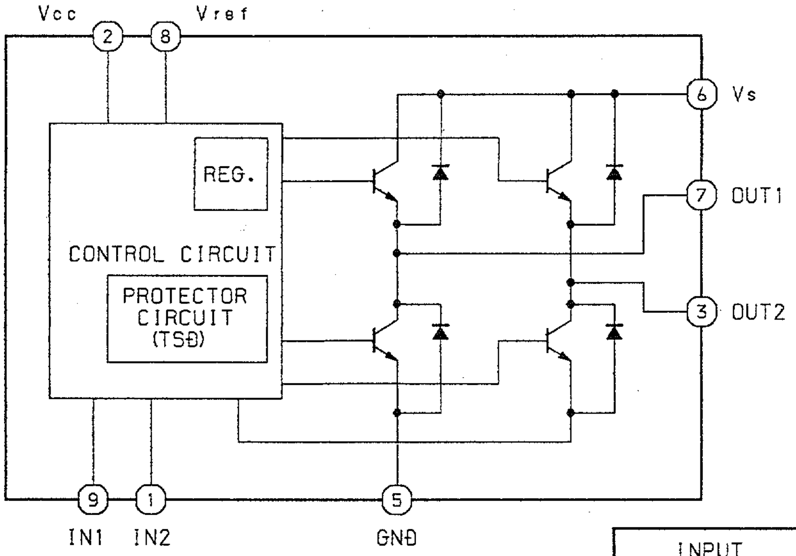
Pin No.	Pin Name	I/O	Description
14	FEB	I	Input from the focus error balance adjustment
15	FEO	O	Focus error amp (FE AMP) output
16	SEL	I	Analog switch control signal input
17	VEE	—	GND
18	FSN	I	Focus output amp (FS AMP) inverted input
19	FSO	O	Focus output amp (FS AMP) output
20	COSC	O	External capacitor to the focus search signal generator is connected
21	OSCI	I	Control signal input to the built-in current source of the focus search signal generation
22	GND	—	GND
23	VCC	—	Power supply pin (+5 V)
24	DMEP	I	Disc motor amp (DM AMP) positive phase input
25	DMEN	I	Disc motor amp (DM AMP) inverted phase input
26	DMEO	O	Disc motor amp (DM AMP) output
27	DMPO	O	Disc motor drive amp (DMP AMP) output
28	PVR	I	Drive amp reference voltage input
29	FMPO	O	Feed motor drive amp (FMP AMP) output
30	FMEO	O	Feed motor amp (FM AMP) output
31	FMEN	I	Feed motor amp (FM AMP) inverted phase input
32	FMEP	I	Feed motor amp (FM AMP) positive phase input
33	FAPO	O	Focus actuator drive amp (FAP AMP) output (Not used)
34	2VRO	O	2VREF amp (2VREF AMP) output
35	2VRP	I	2VREF amp (2VREF AMP) positive phase input
36	2VRN	I	2VREF amp (2VREF AMP) inverted phase input
37	TS2O	O	Tracking servo amp 2 (TS2 AMP) output
38	TS2N	I	Tracking servo amp 2 (TS2 AMP) inverted polarity input
39	TS2P	I	Tracking servo amp 2 (TS2 AMP) positive phase input
40	TS1O	O	Tracking servo amp 1 (TS1 AMP) output
41	TS1N	I	Tracking servo amp 1 (TS1 AMP) inverted phase input
42	TS1P	I	Tracking servo amp 1 (TS1 AMP) positive phase input
43	TSO	O	Tracking output amp 1(TS AMP) output
44	TSN	I	Tracking servo amp (TS AMP) inverted phase input

IC BLOCK DIAGRAM

IC,LC3264P – 80


RAS
5
CLOCK GENERATOR NO.1
CAS
16
CLOCK GENERATER NO.2
MODE CONTROLER
REFRESH COUNTER
LOW DECORDER
(256)
26214 BET MEMORY SEL
CLOCK GENERATOR NO.3
A0 14
A1 13
A2 12
A3 11
A4 8
A5 7
A6 6
A7 10
LOW ADDRESS BUFFER
(256X4)
SENSEAMP I/O GATE
DATA IN BUFFER
DATA OUT BUFFER
(256X4)
CARAM ADDRESS BUFFER
CARAME DECORDER PRE DECORDER
P.C.B BIAS GENERATOR
9 Vcc
18 Vss
4 WE
2 1/01
3 1/02
15 1/03
17 1/04
1 OE

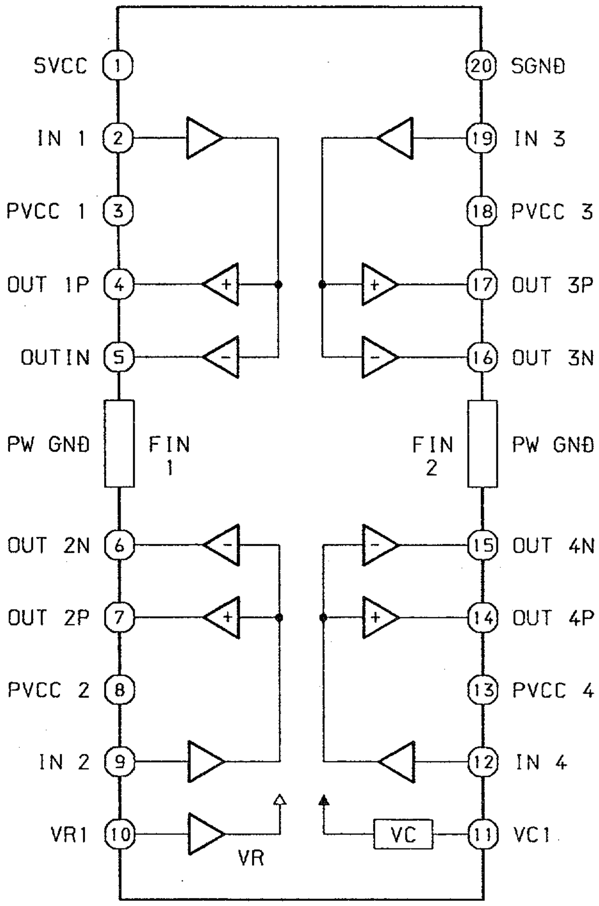
IC,TA7291


Vcc
Vref
2
8
6 Vs
7 OUT1
3 OUT2
REG.
CONTROL CIRCUIT
PROTECTOR CIRCUIT (TSD)
9
1
5
IN1
IN2
GND

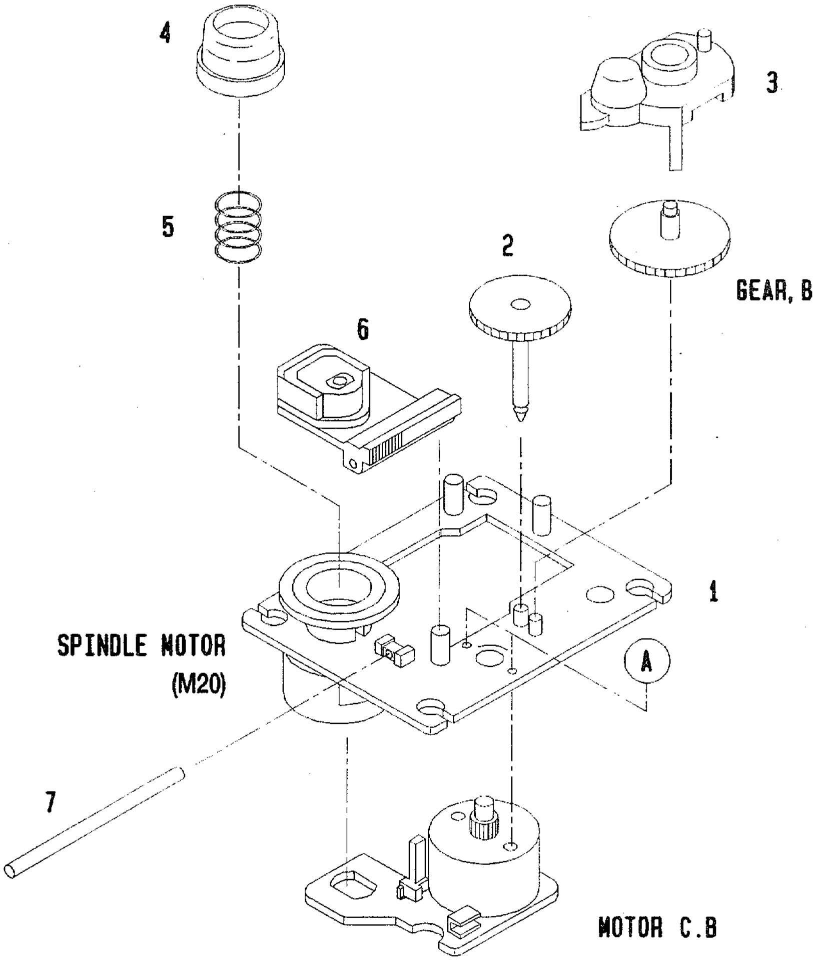
INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW
0	1	L	H	CCW
1	1	L	L	BRAKE

∞ : HI IMPEDANCE
NOTE : INPUT "H" ACTIVE

IC,TA2058F


SVCC 1
IN 1 2
PVCC 1 3
OUT 1P 4
OUT1N 5
PW GND
FIN 1
OUT 2N 6
OUT 2P 7
PVCC 2 8
IN 2 9
VR1 10
VR
20 SGND
19 IN 3
18 PVCC 3
17 OUT 3P
16 OUT 3N
FIN 2
PW GND
15 OUT 4N
14 OUT 4P
13 PVCC 4
12 IN 4
11 VC1
VC
+
-

CD MECHANISM EXPLODED VIEW 1／1

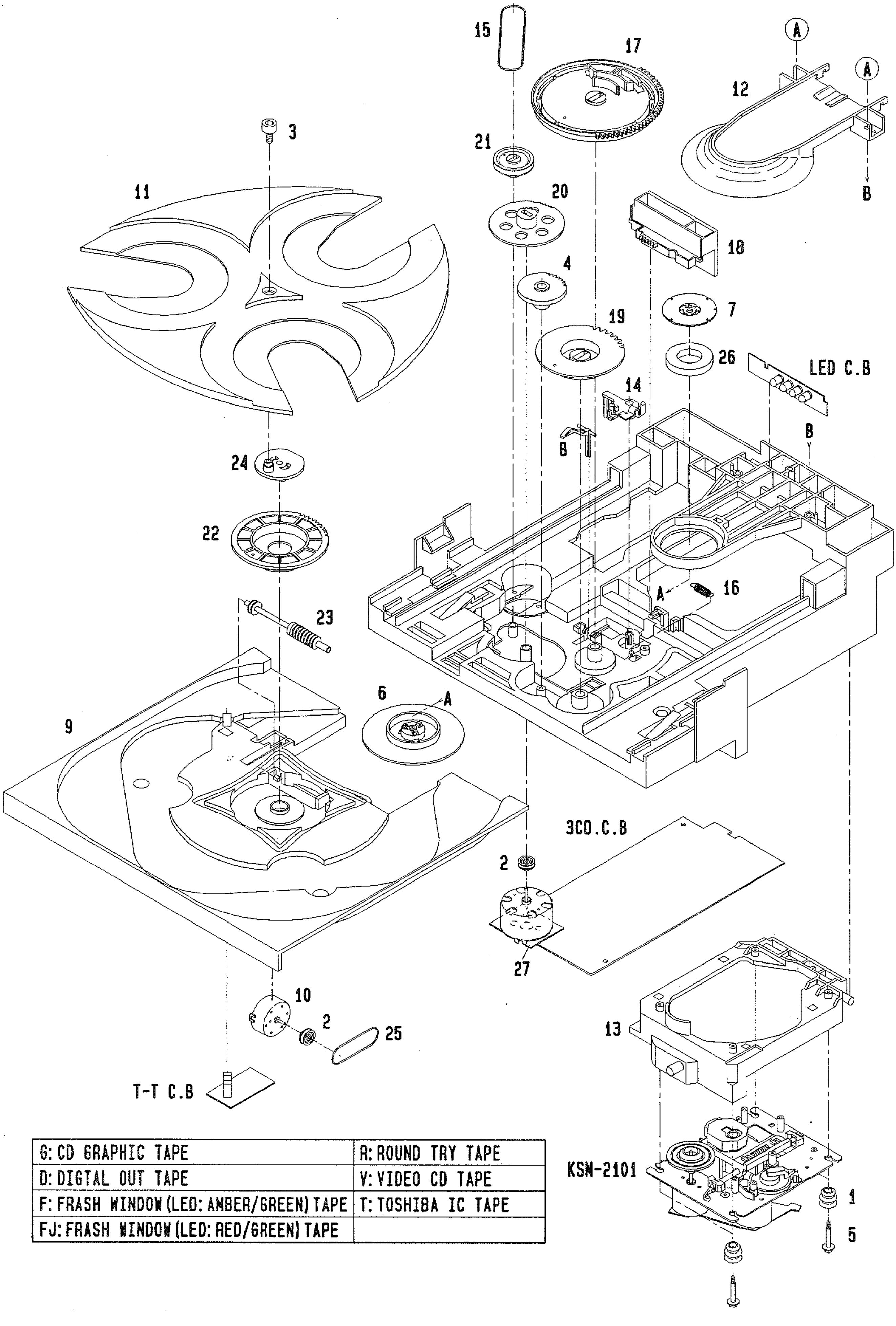


CD MECHANISM PARTS LIST 1／1

DESCRIPTIONで判断できない物は “REFERENCE NAME LIST” を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
1	9X-262-513-310	2C	T.T CHASS ASSY W/MOTOR
2	92-625-188-020	1D	GEAR(A)
3	92-625-544-010	1H	COVER
4	92-625-187-010	1B	RING CENTER
5	92-625-191-010	1B	SPRING COMPRESSION
6	98-848-127-110	2G	OPTICAL PICK UP KSS-210A
7	94-917-565-010	2M	SHAFT SLED
A	87-261-032-210	0E	V+2-3

MECHANICAL EXPLODED VIEW 1/1


15
17
A
A
12
B
3
21
11
20
18
4
7
19
26
LED C.B
14
8
B
24
22
A
16
23
6
A
9
3CD.C.B
2
27
10
2
25
13
T-T C.B
KSN-2101
1
5

G: CD GRAPHIC TAPE	R: ROUND TRY TAPE
D: DIGTAL OUT TAPE	V: VIDEO CD TAPE
F: FRASH WINDOW (LED: AMBER/GREEN) TAPE	T: TOSHIBA IC TAPE
FJ: FRASH WINDOW (LED: RED/GREEN) TAPE	

MECHANICAL PARTS LIST 1／1

DESCRIPTIONで判断できない物は “REFERENCE NAME LIST” を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
1	80-CD3-214-019	0E	CUSH CD A
2	81-ZG1-212-01K	0E	PULLY, LOAD MO
3	81-ZG1-239-019	0E	S-SCREW, TT
4	81-ZG1-250-019	0E	GEAR TRAY RELAY MK2
5	81-ZG1-271-019	0E	S-SCREW, MECH REAR
6	81-ZG1-277-019	1A	HLDR, MAGNET N
7	81-ZG1-229-110	1A	PLATE, MAGENET
8	83-ZG3-213-019	0E	LVR, SW
9	84-ZG1-002-010	1H	TRAY, N01-B
10	87-045-364-010	1F	MOTOR BCH3B(M401)
11	84-ZG1-005-010	1H	TURNTABLE, N01
12	84-ZG1-010-010	1C	IND, CD N
13	84-ZG1-212-01S	1C	HLDR, MECHA N02
14	84-ZG1-208-010	0E	LEVER, CAM
15	84-ZG1-209-010	0E	BELT, SQ1. 8-117. 7
16	84-ZG1-211-019	--	SPR-E CAM S
17	84-ZG1-215-010	1B	GEAR, MAIN CAM BLU
18	84-ZG1-216-010	1A	SLIDE, MECHA CAM YEL
19	84-ZG1-205-11S	1A	GEAR, TRAY
20	84-ZG1-206-110	0E	GEAR, RELAY
21	84-ZG1-219-010	0E	PULLY, RELAY BGE
22	84-ZG1-221-010	1B	GEAR, MAIN TT
23	84-ZG1-235-010	1A	GEAR, WORM SHAFT N02
24	84-ZG1-224-010	0E	LEVER, TT
25	84-ZG1-225-010	0E	BELT, SQ1. 0-63. 3
26	87-036-326-010	1A	MAGNET, CLAMPER 93
27	84-ZG1-231-019	1A	SHILD CORE, MOT S
A	87-067-703-019	0E	BVT2+3-10 (W/0 SLOT)

ギヤ、メインカムの位相の合わせ方

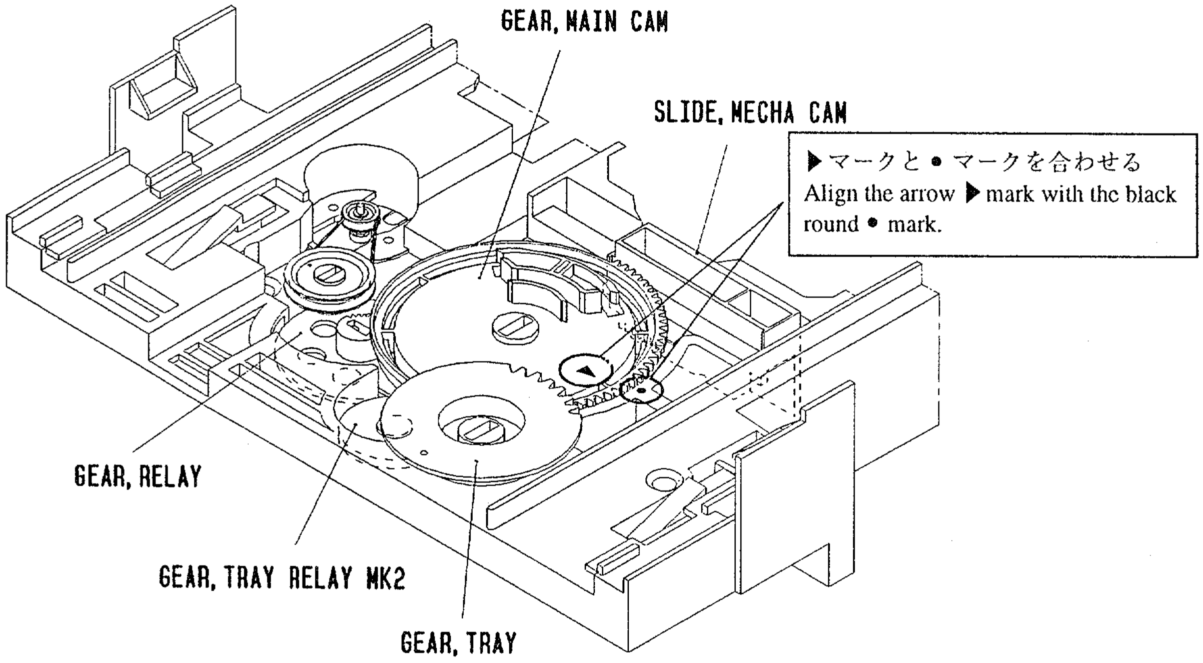
1) CHAS, MECHのツメを下側に押し、TRAYを外す。
2) 下図の様にGEAR, MAIN CAMの矢印とCHAS, MECHAの点印を合わせる。
3) SLIDE, MECH CAMが右側の位置にある事を確認し、TRAYをゆっくり挿し込んで下さい。

注意: GEAR, MAIN CAMの位相がズレている場合、チャッキング及びトレーが誤動作を起こします。

How to Adjust the Rotating Phase of the Gear, Main Cam

1) Push down the hooking catch of the CHAS. MECH, and remove the TRAY.
2) Align the arrow mark of the Gear, Main Cam with the black round mark of the CHAS, MECHA as shown below.
3) Confirm that the Slide, Mech Cam is located in the right position, then insert the TRAY gently.

Caution: If the rotating phase of the Gear, Main Cam is incorrectly adjusted, the chucking operation and tray movement will have malfunction.



▶マークと●マークを合わせる
Align the arrow ▶ mark with the black round ● mark.

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, SERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER
サージサプレッサ	SERGESUPPRESSOR
セラコン	CAP,CERA

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL
ジグアーム	ARM,SHAFT
ジグガイド	GUIDE,SHAFT
ストラップ	STRAP
トクナベ	S-SCREW
ヒンジ	HINGE
ヒンジビス	S-SCREW
ビスセレート	SCREW,SERRART

サービス技術ニュース	
番号	連絡内容
G－　－	
G－　－	
G－　－	

931196 750038

アイワ株式会社
AIWA CO.,LTD.

Tokyo Japan

〒110 東京都台東区池之端1－2－11　☎ 03 (3827) 3111 （代表）

Printed in Singapore

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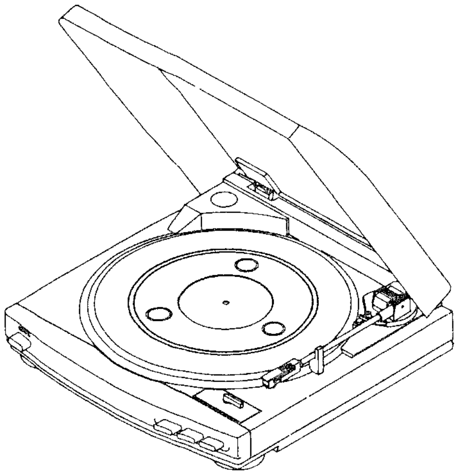
aiwa
SERVICE

PX-E850



STEREO TURNTABLE SYSTEM

• TYPE:EE,K,U,H,HE

SERVICE MANUAL

SPECIFICATIONS

Motor	DC servo motor
Drive system	Belt drive
Speed	33-1/3 rpm, 45 rpm
Wow & flutter	0.25% (WRMS)
S/N ratio	45 dB (DIN-B)
Cartridge type	VM type
Stylus	AIWA AN-11
Output level	200 mV (2.5 mV/sw. OFF)
Dimensions	Approx. 360 × 97 × 358 mm (w/h/d) ($14^{1}/_{4}$ × $3^{7}/_{8}$ × $14^{1}/_{8}$ in.)
Weight	Approx. 2.4 kg net (5.28 lb)

Power requirement

USA model (PX-E850U)	120 V AC, 60 Hz
European model (PX-E850E)	230 V AC, 50 Hz
U. K. model (PX-850K)	230 V – 240V AC, 50 Hz
Models for other countries (PX-E850H, HE)	110 V – 127 V AC, 220 V – 240 V AC selectable, 50/60 Hz

Power consumption 3 watts

- Design and specifications are subject to change without notice.

S/M Code No. 09-947-070-90I

ADJUSTMENT

1. Auto Return Adjustment.
   Test Record (HP – 4005)

Adjustment	Count
Auto Return	9 – 12

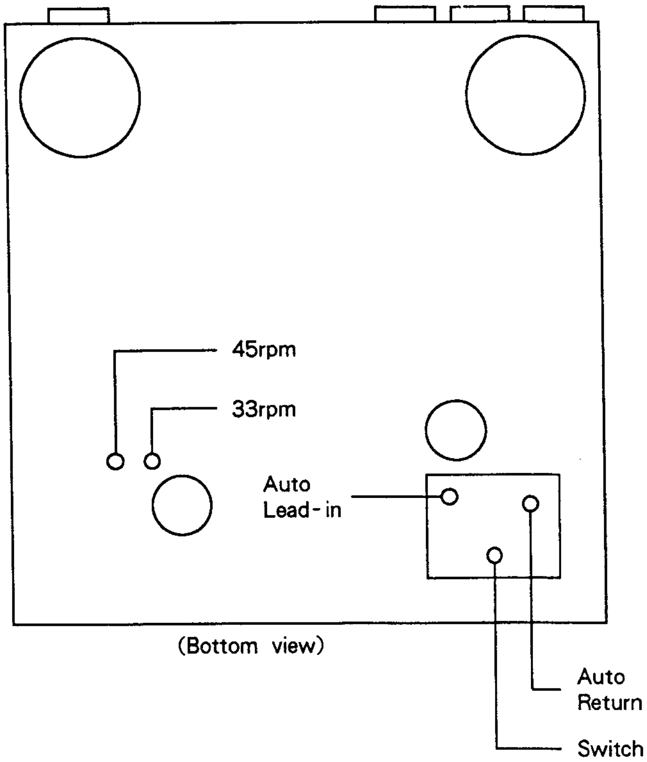
2. Auto Lead – in Adjustment.
   Test Record (HT – 5 side1)

Adjustment	Disk Size	Count
Auto Lead-in	30cm	13 – 17
	17cm	13 – 16

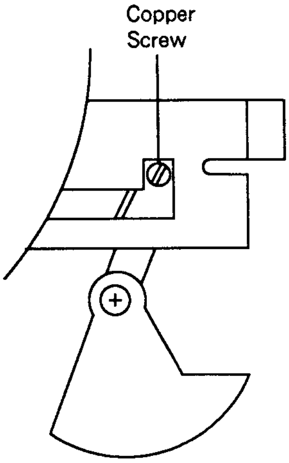
3. Phono Motor Speed Adjustment.
   Test Record (HP – 4005)

33rpm	3000Hz
45rpm	3000Hz

4. Switch Adjustment.
   (1). Fix tonearm on armrest, remove bottom cover.
   (2). Turn the switch adj. screw so that the plastic tip touches the center position of leaf switch.
   (3). Turn the copper screw so that the gap between two contact point on the leaf switch is from 0.35mm to 0.8mm.



(Bottom view)



PRACTICAL SERVICE FIGURE

< Turntable Section >

Wow & flutter : Less than 0.23% (WRMS)

< Cartridge Section >

Stylus trip : 0.6mil
Stylus pressure : 3.5g
Output voltage : 127~262mV

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

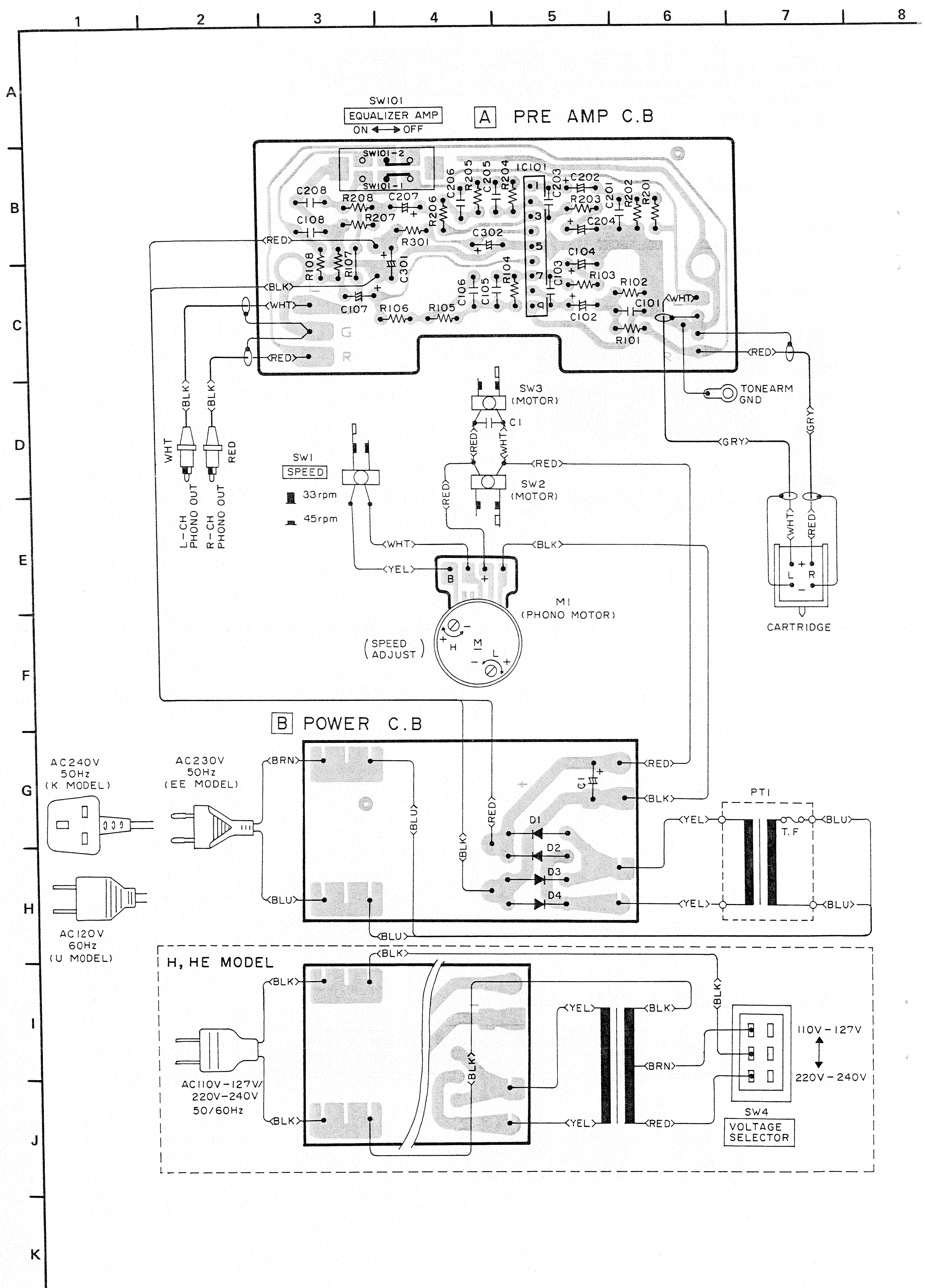
REF. NO	PART NO.	カンリ NO.	DESCRIPTION
IC			
	87-027-683-010		IC, TA7325
DIODE			
	87-001-783-080		DIODE, 1N4002
PRE AMP C. B			
	S8-E27-BK0-190		SIGNAL WIRE
C102	87-010-404-010		CAP, E 4.7UF/50V M
C104	87-010-412-010		CAP, E 10UF/25V M
C107	87-010-404-010		CAP, E 4.7UF/50V M
C202	87-010-404-010		CAP, E 4.7UF/50V M
C204	87-010-412-010		CAP, E 10UF/25V M
C207	87-010-404-010		CAP, E 4.7UF/50V M
C302	87-010-112-010		CAP, E 100UF/16V M
SW101	S3-PXE-900-280		SW, SLIDE
POWER C. B			
C1	87-010-237-010		CAP, E 1000UF/16V M

■ ACCESSORIES／PACKAGE LIST

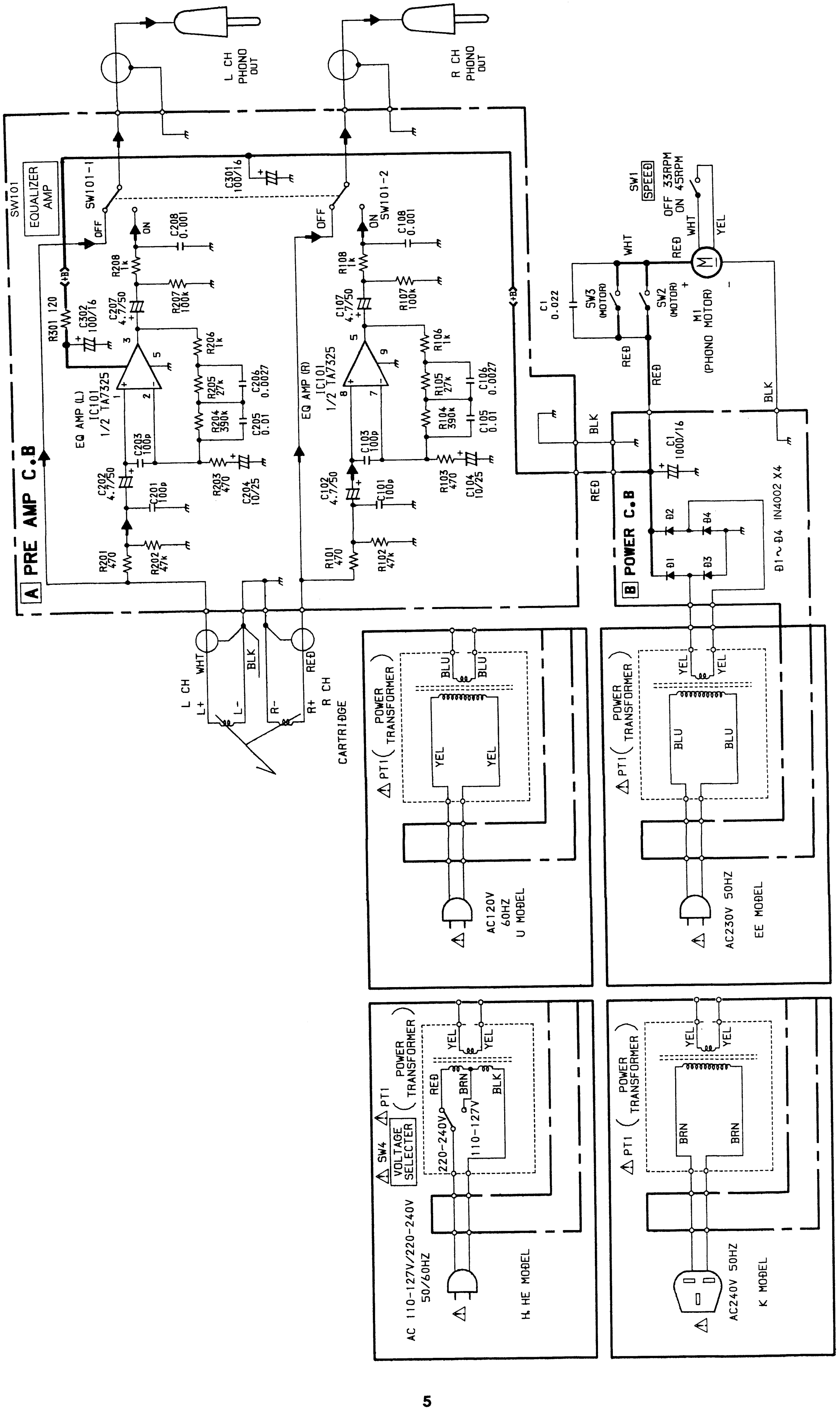
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	SX-E85-040-8U0		INSTRUCTION BOOKLET〈U〉
1	SP-XE8-504-080		INSTRUCTION BOOKLET〈EXCEPT U〉
2	S0-0H2-000-160		45 RPM ADAPTOR
3	S2-031-320-030		TRANSFERBLE SOCKET〈H, HE〉

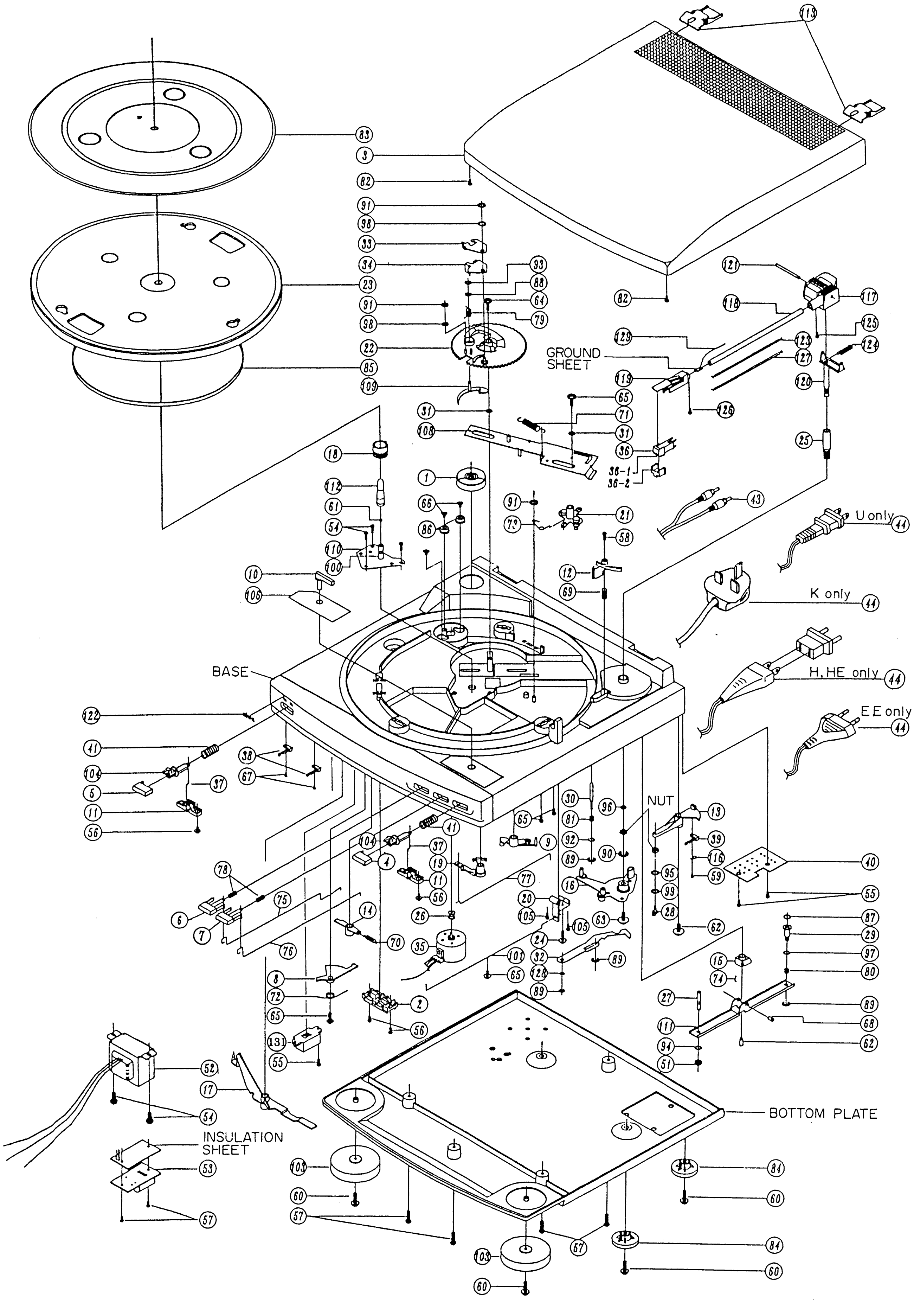
WIRING


1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
H
I
J
K
SW101
EQUALIZER AMP
ON ⟷ OFF
A PRE AMP C.B
SW101-2
SW101-1
C208
R208
C207
C108
R207
R206
C206
R205
C205
R204
IC101
C203
C202
R203
C201
R202
R201
C204
R301
C302
R108
R107
C301
C104
C103
R103
R104
C106
C105
R102
C101
C107
R106
R105
C102
R101
RED
BLK
WHT
G
R
BLK
BLK
WHT
RED
L-CH PHONO OUT
R-CH PHONO OUT
SW3 (MOTOR)
C1
RED
WHT
RED
SW2 (MOTOR)
RED
SW1
SPEED
33rpm
45rpm
WHT
YEL
BLK
B
+
M1 (PHONO MOTOR)
(SPEED ADJUST)
H
M
L
TONEARM GND
GRY
GRY
WHT
RED
L
R
CARTRIDGE
B POWER C.B
AC240V 50Hz (K MODEL)
AC230V 50Hz (EE MODEL)
AC120V 60Hz (U MODEL)
BRN
BLU
BLU
RED
BLK
C1
D1
D2
D3
D4
RED
BLK
YEL
YEL
PT1
T.F
BLU
BLU
BLU
H, HE MODEL
BLK
BLK
BLK
BLK
AC110V-127V/ 220V-240V 50/60Hz
YEL
BLK
BRN
YEL
RED
BLK
110V-127V
220V-240V
SW4
VOLTAGE SELECTOR

SCHEMATIC DIAGRAM


L CH PHONO OUT
R CH PHONO OUT
SW101
EQUALIZER AMP
SW101-1
SW101-2
OFF
ON
C301 100/16
C208 0.001
C108 0.001
R208 1k
R108 1k
R207 100k
R107 100k
R301 120
C302 100/16
C207 4.7/50
C107 4.7/50
R206 1k
R106 1k
R205 27k
R105 27k
C206 0.0027
C106 0.0027
R204 390k
R104 390k
C205 0.01
C105 0.01
EQ AMP (L)
EQ AMP (R)
IC101 1/2 TA7325
C203 100p
C103 100p
R203 470
R103 470
C204 10/25
C104 10/25
C202 4.7/50
C102 4.7/50
C201 100p
C101 100p
R201 470
R101 470
R202 47k
R102 47k
A PRE AMP C.B
(+B)
L CH
R CH
WHT
BLK
RED
L+
L-
R-
R+
CARTRIDGE
C1 0.022
SW3 (MOTOR)
SW2 (MOTOR)
M1 (PHONO MOTOR)
SW1 SPEED
OFF 33RPM
ON 45RPM
WHT
YEL
RED
BLK
C1 1000/16
D1~D4 IN4002 X4
D1
D2
D3
D4
B POWER C.B
PT1 (POWER TRANSFORMER)
BLU
YEL
AC120V 60HZ
U MODEL
AC230V 50HZ
EE MODEL
SW4 VOLTAGE SELECTER
220-240V
110-127V
BRN
AC 110-127V/220-240V 50/60HZ
H, HE MODEL
AC240V 50HZ
K MODEL

MECHANICAL EXPLODED VIEW1／1


113
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GROUND SHEET
127
119
120
126
31
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108
71
31
36
36-1
36-2
25
18
112
1
61
66
91
21
43
54
86
73
58
U only
44
110
100
12
10
106
69
K only
44
H, HE only
44
BASE
E E only
44
122
41
38
67
104
5
37
11
56
30
96
NUT
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81
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89
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111
68
56
94
62
131
55
51
52
17
BOTTOM PLATE
54
INSULATION SHEET
53
103
84
60
60
57
57
57
103
84
60
60

MECHANICAL PARTS LIST1／1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	- - -		45 RPM ADAPTOR
2	S0-0B6-001-440		PRESS SET
3	SP-XE8-508-950		DUST COVER
4	SP-XE8-509-000		CUEING KNOB
5	SP-XE8-508-970		SPEED KNOB
6	SP-XE8-508-980		START KNOB
7	SP-XE8-508-990		CUT KNOB
8	S0-SL2-4F2-340		PENDULUM(L)
9	S0-SL2-4F2-350		PENDULUM(M)
10	S0-SL2-4F2-360		SELECT RECORD KNOB
11	S0-0F7-002-590		KNOB SET
12	S0-SL2-4F2-380		LIFTER
13	S0-SL2-4F2-390		FIEXING SWITCH SET
14	S0-SL2-4F2-400		PENDULUM(S)
15	S0-SL2-4F2-410		LIFTER SET
16	S0-SL2-4F2-420		STATING LEVER
17	S0-SL2-4F2-430		STATING SUPPORT
18	S0-SL2-4F2-440		SMALL GEAR
19	S0-SL2-4F2-450		SELECTOR
20	S0-0F7-002-720		OIL SHAFT SET
21	S0-SL2-4F2-470		SELECT PLATE
22	S0-SL2-4F2-480		CAM GEAR
23	S0-0F7-002-280		PLATTER TARNTABULE
24	S2-F20-001-000		SCREW
25	S0-SL2-4F1-070		TONE ARM SHAFT SET
26	S0-0L1-001-330		PULLEY
27	S0-SL2-4F1-120		SHAFT
28	S0-SL2-4F1-130		SHAFT
29	S0-SL2-4F1-140		SHAFT
30	S0-SL2-4F1-160		SHAFT
31	S0-SL2-4F1-170		COPPER WASHER
32	S0-SL2-4F1-260		CONTROL PLATE
33	S0-SL2-4F1-300		FRICTION LINK
34	S0-SL2-4F1-310		ACTUATING LINK
35	S0-1H7-030-380		MOTOR MMI-6T2RWK
36	S2-E27-BK0-480		CATRIDGE(W/STYLUS)
36-1	S1-E27-BK0-230		STYLUS
36-2	S0-0B6-011-800		STYLUS COVER
37	S2-F20-000-100		STEEL CLAMPER
38	S3-SL2-4F0-110		MICRO SWITCH
39	S0-3L1-000-160		MICRO SWITCH
40	S4-PXE-906-770		DUAL PREAMP, P. C. B ASSY
41	S0-3B6-000-400		SPRING
43	S8-E27-BK0-190		SIGNAL WIRE
⚠ 44	SC-132-0FA-034		AC CORD〈U〉
⚠ 44	S0-920-020-010		AC CORD〈H, HE〉
⚠ 44	S9-300-401-6A0		AC CORD(E)〈E〉
⚠ 44	SH-MD5-00B-037		AC CORD(K)〈K〉
⚠ 51	S1-A10-000-400		NUT
⚠ 52	SP-XE8-50K-070		POWER TRANS〈K〉
⚠ 52	SP-XE8-50U-067		POWER TRANS〈U〉
⚠ 52	S1-PXE-900-470		POWER TRANS(H)〈H, HE〉
⚠ 52	S1-PXE-850-068		POWER TRANSFORMER〈E〉
53	S4-PXE-907-100		POWER P. C. B ASSY
54	S2-B60-005-600		SCREW
55	S2-B60-005-700		SCREW
56	S2-B60-005-800		SCREW
57	S2-B60-007-200		SCREW
58	S2-MD2-608-100		SCREW
59	S2-K68-008-800		SCREW
60	S2-SL2-4F0-920		SCREW
61	S2-SL2-4F0-930		SCREW
62	S2-SL2-4F0-940		SCREW
63	S2-SL2-4F0-950		SCREW
64	S2-SL2-4F0-960		SCREW
65	S2-SL2-4F0-970		SCREW
66	S2-SL2-4F1-090		SCREW
67	S2-SL2-4F0-990		SCREW
68	S2-SL2-4F1-000		SCREW
69	S0-3MD-260-590		SPRING
70	S3-SL2-4F0-660		SPRING
71	S3-SL2-4F0-670		SPRING
72	S3-SL2-4F0-680		SPRING
73	S3-SL2-4F0-690		SPRING
74	S3-SL2-4F0-720		SPRING
75	SP-XE8-501-820		SPRING
76	SP-XE8-501-830		SPRING
77	S0-3L1-001-030		SPRING
78	S3-SL2-4F0-760		SPRING
79	S3-SL2-4F0-770		SPRING
80	S3-SL2-4F0-780		SPRING
81	S3-SL2-4F0-790		SPRING
82	S4-B60-002-6A0		FOOT FOR DUST COVER
83	S4-PXE-900-720		PLATTER MAT
84	S4-SL2-4F0-360		RUBBER FOOT
85	S4-PXE-900-760		BELT
86	S4-SL2-4F0-380		RUBBER FOOT FOR MOTOR
87	S4-SL2-4F0-390		RUBBER CAP
88	S0-6F2-000-060		WASHER
89	S0-6F2-000-110		E-RING WASHER (3M/M)
90	S0-6F2-000-120		E-RING WASHER (5M/M)
91	S0-6F2-000-130		CS WASHER (3M/M)
92	S0-6H2-000-190		WASHER METAL 3-5-1
93	S0-6B3-000-290		E-RING WASHER 1. 5MM
94	S0-6B3-000-390		SPRING WASHER METAL 3-5-1
95	S0-6D2-000-510		SPRING WASHER METAL 3-6-1
96	S6-SL2-4F0-550		WASHER
97	S6-SL2-4F0-560		WASHER METAL 5-8-0. 5
98	S6-SL2-4F0-570		WASHER METAL 3-10-0. 5
99	S6-SL2-4F0-580		WASHER
100	S0-7B6-000-020		STEEL BALL
101	SP-XE8-501-840		SPRING FOR CUEING
103	S0-PXE-903-320		FOOT RING
104	S0-0B6-001-390		KNOB SHAFT
105	S2-MD2-608-200		SCREW
106	S0-1L1-002-600		DECORATIVE PLATE(SIZE)
108	S3-SL2-4F0-490		RETURN LINK ASS'Y
109	S3-SL2-4F0-500		CAM GEAR CONTROL ASY
110	S3-SL2-4F0-510		PLATE SHAFT SET ASY
111	S3-SL2-4F0-520		CUEING LEVER ASSY
112	S2-PXE-900-090		PLATER SHAFT ASS'Y
113	S0-3B6-000-260		HINGE ASS'Y
116	S1-3H4-610-030		CONDENSER
117	S0-SL2-4F2-310		TONE ARM SET
118	S0-SL2-4F1-320		TONE ARM TUBE
119	S0-SL3-4F2-320		HEADSHELL
120	S3-SL2-4F0-560		ROTARY SHAFT ASSY
121	S0-SL2-4F1-180		PIN (FOR TONEARM SET)
122	SP-XE8-508-500		DECORATIVE PLATE
123	S4-PXE-900-900		SHIELD WIRE(WHITE)
124	S3-SL3-4F0-830		SPRING
125	S2-F20-000-100		SCREW
126	S2-SL2-4F1-050		SCREW
127	S7-PXE-900-910		SHIELD WIRE(RED)
128	S6-DP3-6F0-640		WASHER
129	S4-PXE-900-920		WIRE(BLACK)
130	- - -		NOT USED
⚠ 131	S3-PXE-900-270		SL, SWITCH〈H, HE〉

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, SERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER
サージサプレッサ	SERGESUPPRESSOR
セラコン	CAP,CERA

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL
ジグアーム	ARM,SHAFT
ジグガイド	GUIDE,SHAFT
ストラップ	STRAP
トクナベ	S-SCRW
ヒンジ	HINGE
ヒンジビス	S-SCRW
ビスセレート	SCRW,SERRART

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